MILITARY INTELLIGENCE PROFESSIONAL BULLETIN

July-
September 2000
PB 34-00-3

MI Support to the Brigade

FROM THE EDITOR

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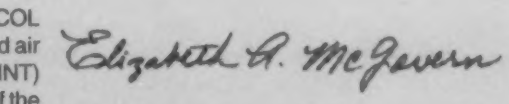

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FEATURES

DEPARTMENTS

By order of the Secretary of the Army:
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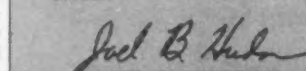

JOEL B. HUDSON
Administrative Assistant to the Secretary of the Army

ERIC K. SHINSEKI
General, United States Army Chief of Staff

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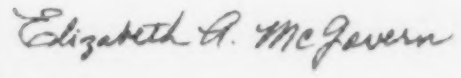

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0010306

VANTAGE POINT

by Major General John D. Thomas, Jr.

In the last several issues of the ***Military Intelligence Professional Bulletin***, I have discussed the exciting transformation taking place within the Army and Military Intelligence. This is truly a time of unprecedented change. We are beginning to bring new versions of the All-Source Analysis System, Common Ground Station, Prophet system, Tactical Exploitation System, and the brigade commanders' Tactical UAV (unmanned aerial vehicle) to the field. The Army is rapidly becoming a digitized force, taking full advantage of the power of the information age. We are building new organizations with the Interim Brigade Combat Team, a Contingency Support Brigade, and increased human intelligence capability. Our doctrine and TTP (tactics, techniques, and procedures) are quickly evolving to support our expanding missions. Our MI Corps is clearly changing.

However, the greatest imperative during this time of exciting transformation is not the fielding of hardware or publishing doctrine, it is leadership. Change is hard. It requires a team effort. It makes us step out of our comfort zones and assume risk. Things are not the way they used to be. "*We don't do it that way here*" is a killer phrase. If Intelligence is to make the contribution that our leadership expects, we need to work together and embrace this period of change as an opportunity. It gives a chance to improve ourselves, apply the lessons learned from hundreds of campaigns in combat and in the Combat Training Centers (CTCs), and to reach out to embrace new concepts.

U. S. Army photo.

Major General John D. Thomas, Jr.

As leaders of the Intelligence Corps, we must understand the changes and look beyond some immediate effect to recognize the value added to military operations. We must keep our subordinates up to speed on the transformation and the ongoing dialog on the issues. Strong, enthusiastic leadership will keep up morale and help people deal with the changes.

The Intelligence Center receives many superb lessons learned reports from units, observer/controllers at the CTCs, and many other sources. Your work in submitting that information has formed the basis of our transformation, keep up the information flow. We have made information about the transformation available on our websites, use them. I encourage each of you to be active supporters of these transformation efforts. If we provide solid leadership during this time of significant change, we will remain...

ALWAYS OUT FRONT!

Army Transformation Websites

- **http://138.27.35/bct/index.html**
  Fort Huachuca Army Transformation Process Homepage
- **http://www.tradoc.army.mil/transformation/index.html**
  TRADOC Transformation Homepage
- **http://www.army.mil/aps_ch24.htm**
  U.S. Army Posture Statement FY01
- **http://www.army.mil/armyvision/default.htm**
  Briefings on the Army Vision, Transformation, etc.

CSM FORUM

by Command Sergeant Major Scott C. Chunn

This edition of the ***Military Intelligence Professional Bulletin*** is devoted to the Initial Brigade Combat Teams (IBCTs) and MI support to brigades. The Army's vision is "Soldiers on point for the Nation....Persuasive in Peace, Invincible in War."

These are exciting times. We are in the process of transforming our great Army to make it better and enhance its ability to prevail in all the types of operations it will face. This transformation will occur in three major phases: the initial phase, the interim capability phase, and the objective force phase. During this initial phase, we will field IBCTs—the first to Fort Lewis, Washington, in September—and equip them with available surrogate and loaned equipment. These IBCTs will develop the organizational and operational model for follow-on brigades using this readily available equipment.

Once the Army has certified the Initial Brigade Combat Teams, the interim capability phase will begin and the Army will field the interim force based on the IBCT-validated structure. This force will seek the characteristics of the objective force, within the constraints of available off-the-shelf equipment, and come as close to realizing the objective force as is possible with existing equipment.

The objective force phase will begin when technology permits the fielding of systems that will achieve the desired force characteristics. Those characteristics are responsiveness, deployability, agility, versatility, lethality, survivability, and sustainability. The new vision charts the course for the Army to transform itself into a force that has these characteristics and can sustain dominance at every point on the spectrum of operations.

Retention continues to be an issue that requires everyone's attention. To retain sufficient numbers of our high-quality officers, noncommissioned officers (NCOs), and soldiers, we, the leaders, must continue to take steps to improve soldier well-being, training, and their quality of life.

As always, train hard, take care of soldiers and their families, and have fun. Thanks!

ALWAYS OUT FRONT!

U. S. Army photo.

Command Sergeant Major Scott C. Chunn

You Could Win the Army Deployment Excellence Award

The Army Deployment Excellence Award is a new Army-level award that will recognize deploying units and deployment support organizations that meet or exceed established deployment standards. The award should encourage units and installations within the Army to become skilled in deployment operations. This program should help to capture and share innovative initiatives that improve the deployment process.

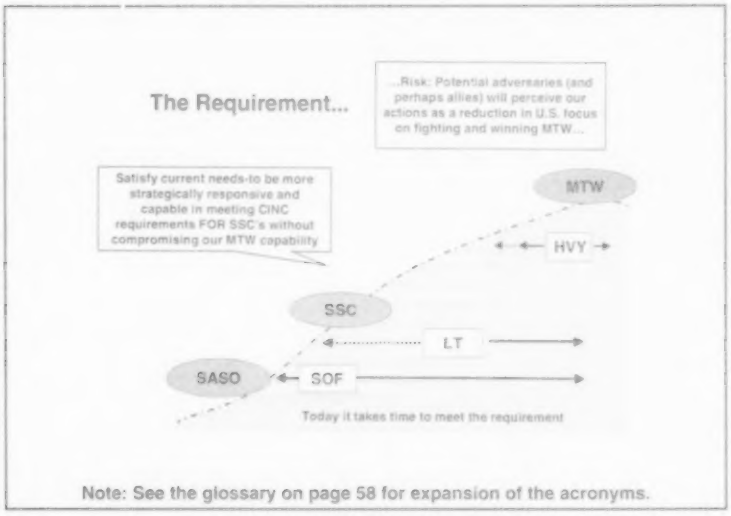
Winners can be active Army, U.S. Army Reserve, or Army National Guard organizations. Competition will be in one of three functional areas: deploying unit, supporting unit, and installation. There will be presentations in small (team to detachment) and large (company to brigade) categories. The competition year for the first annual award began April 1 and ends 31 March 2001. For more information, see the implementing guidance and evaluation criteria at http://www.transchool.eustis.army.mil/DEA/DEA.htm. (TRADOC Release 00-05-11, 30 June 2000.)

The Brigade Combat Team—The Transformation Process

by Major Ted L. Martens

The operational environment in which our military fights and deploys has changed over the last ten years. Following Operation DESERT STORM and the dissolution of the Soviet Union in the early 1990s, the U.S. military has participated in operational deployments to stability and support operations and small-scale contingencies (SSCs). Peacekeeping, peace enforcement, and humanitarian relief activities best characterize these types of operations. There is generally little threat of enemy engagement but circumstances require our participation to fulfill the National Command Authority's goals. SSCs contain stability and support operations-like qualities as well as the potential threat of force-on-force engagement with a structured, dismounted threat that functions in small units of platoon to company size and retains a mobile reserve. Additionally, SSCs may contain unconventional threats such as terrorist organizations, warring factions, and rogue individuals. Figure 1 graphically depicts the operational spectrum and where these two types of operations fit in relation to a major theater war (MTW).

General Eric K. Shinseki, Chief of Staff of the Army (CSA), announced his vision for the future Army during a 12 October 1999 speech at the annual AUSA (Association of the United States Army) conference in Washington, D.C. In his speech, the CSA discussed the current dilemma facing the Army. Our light forces, while highly mobile, lack the lethality and staying power required following forced entry operations and in long-term combat. On the other hand, our heavy forces, while extremely lethal, are not rapidly deployable. Indications to support this were evident during the build-up of forces for Operation DESERT SHIELD. Operational deployments to Somalia, Haiti, Bosnia-Herzegovina, and Kosovo have required a force that can mobilize quickly, conduct early entry operations, deter threats from engaging in combat operations, and potentially shape the battlefield for decisive operations. Deployments to both Bosnia and Kosovo have demonstrated our need to deploy sufficient combat power in a timely manner.



Note: See the glossary on page 58 for expansion of the acronyms.

Figure 1. The Operational Spectrum.

Since his speech, the Army has responded to General Shinseki's vision by developing and implementing the Army Transformation Concept. The phased concept begins with the development of Brigade Combat Teams (BCTs) and ends with the transition of the Army to an Objective Force. The initial phase centers on the transformation of two brigades which will be at Fort Lewis, Washington. The first brigade to transform to an Initial BCT (IBCT) is the 3d Brigade, 2d Infantry Division; the second will be the 1st Brigade, 25th Infantry Division (Light). The interim phase will encompass those brigades that transform into IBCTs sometime after 2003 as well as a redesign of the divisional structure. The final phase is the design of the brigades, divisions, and corps that will comprise the Objective Force.

The BCT Intelligence Structure: MI Company

Technological advances have enabled our soldiers in ways inconceivable just ten years ago. These advances include introduction of Common Ground Stations (CGSs), All-Source Analysis System (ASAS)–Remote Workstations (ASAS-RWSs), unmanned aerial vehicles (UAVs), and an increased reliance on human intelligence

Of particular interest is the fact that the MI Company is organic to the BCT

(HUMINT) collection and analysis. They have resulted in an enhanced ability to collect, process, and analyze vast amounts of assembled combat information and data across the spectrum of conflict. Additionally, the Force XXI Battle Command, Brigade and Below (FBCB^2) system will exponentially increase our requirement to process and analyze information. Once the Army has fully fielded the system, every vehicle and dismounted soldier outfitted with it becomes a collector and can report information digitally.

The Directorate of Combat Developments at Fort Huachuca has designed an IBCT intelligence structure uniquely equipped and staffed to support the collection, processing, analysis, and presentation of that information to support the BCT commander and staff as they command and control (C^2) the organization. Of particular interest is the fact that the **MI Company** is organic to the BCT. Gone is the habitual relationship of the Direct Support MI Company within the MI battalion at division level. The rapid deployment criteria and the unit cohesion required in the BCT demand an intelligence support organization that lives, breathes, and understands how the BCT will fight and its unique information requirements. The MI company's mission is to provide timely, relevant, accurate, and synchronized intelligence, surveillance, and reconnaissance (ISR) support to the commander, staff, and subordinates. This support will encompass planning, preparation, and execution of multiple, simultaneous decisive actions on a distributed battlefield. To accomplish our mission, we have developed a unique company structure that includes analysis, collection, and ISR planning and execution.

Due to force structure limitations, the MI company headquarters is intentionally sparse (see Figure 2). The commander has the responsibility of not only commanding the company but also serving as the senior integrator of analytic and processing activities in support of the BCT S2. The commander provides the C^2 for the HUMINT teams and operational management teams as well.

The **ISR Analysis Platoon** focuses on receiving, processing, fusing, and analyzing information originating from both organic collectors and theater, joint, and national agencies and organizations. It is extremely reliant on higher headquarters to provide long-term detailed analysis, tailored IPB (intelligence preparation of the battlefield) products focused at the entity level, and access to distributed databases and products.

The **ISR Integration Platoon** is unique. The platoon comprises three sections: the ISR Requirements Section, S2X element, and CGS section.

The ISR Requirements Section provides requirements management through the development and dynamic execution of the ISR plan. This plan does not solely focus on traditional intelligence collection systems. Every soldier on the battlefield is now a potential collector and they are included in the plan, as are traditional sensors and collectors such as—

- Counterbattery radars (see the article on page 43).
- Ground reconnaissance squads using the Long-Range Advanced Scout Surveillance System (LRAS3).
- UAVs.
- Prophet ground signals intelligence (SIGINT) system.
- Ground surveillance radars (GSRs).
- REMBASS II (replaces the I-REMBASS (Improved-Remotely Monitored Battlefield Sensor System) in the BCT).

The ISR plan accounts for all of those systems and more. The ISR requirements officers and noncom-

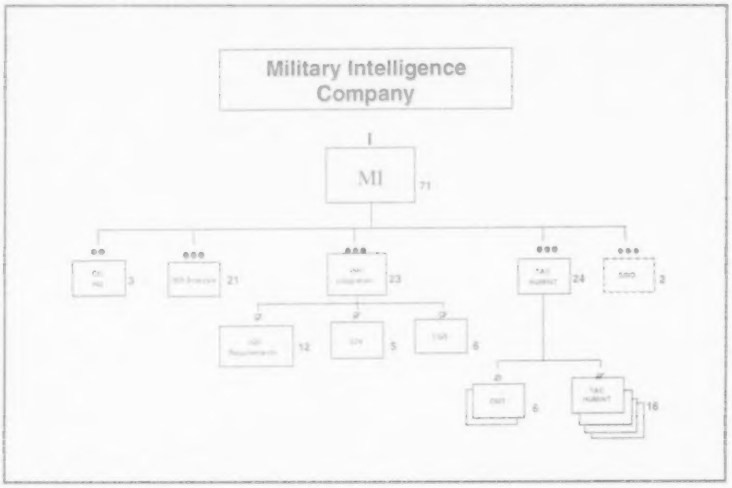


Figure 2. The BCT MI Company.

missioned officers (NCOs) will dynamically adjust collectors and sensors to fill information gaps by maintaining the visibility of sensor status and effectiveness.

The Task Force XXI and Division Advanced Warfighting Experiments (AWEs) have demonstrated the fact that situational awareness (SA) is dependent upon the integration of all collectors, not just intelligence-specific sensors. ISR integration is the execution and management of cross-BOS (battlefield operating system), multiple intelligence discipline (multi-INT) collectors. It comprises three essential components: requirements management, asset visibility, and effectiveness assessment.

Requirements management includes the traditional collection management tasks of translating the commander's intent and concept of the operation into executable tasks to ensure collection of the appropriate information to support his information requirements. Determining how to best satisfy those requirements, in addition to responding to requests for information from subordinate S2s, will be a significant task at the brigade level. The IBCT's MI company will have the capability to use both organic resources and non-organic theater, joint, and national organizations, agencies, and assets to satisfy those requirements. The essential component is to manage those resources adequately to ensure the tasking of the appropriate sensor or organization to satisfy the individual request or information shortfall.

In simple terms, asset visibility is the ability to "see" the current status of the sensors. To successfully employ appropriate resources to satisfy information requirements, the ISR integrator must be able to digitally receive the current health and status (Class III, IX, etc.) of the asset as well as its success in collecting information of value.

The value of systems employed to collect information is only as good as the ability of the sensor to collect that information. Effectiveness assessment provides the ISR integrator with the ability to ensure we task the appropriate asset against the information gap and the ability to adjust dynamically as the situation changes.

ISR integration encompasses all of the concepts described above and more. The integration team must be able to identify the appropriate resource immediately that best satisfies the information requirement. Additionally, the team must be familiar with every sensor's capabilities and limitations in order to adjust sensor taskings to ensure the optimal resource usage in real time.

The most unique aspect of the IBCT is the formation of an organization dedicated to information collection and support to SA

Operations in an SSC environment are heavily reliant on HUMINT (human intelligence) collection and analysis; recent deployments have demonstrated an increased need for HUMINT operations. With an increase in HUMINT collectors comes a requirement to manage their activities. The *S2X Section* provides that management by synchronizing and deconflicting organic collection efforts with theater and national HUMINT agencies to ensure the full coordination of the HUMINT aspects of the ISR plan.

The *CGS Team* provides the BCT with a rapidly deployable, mobile, and responsive intelligence processing capability. It also supports the ISR integration effort by providing visibility on the location and focus of the Joint STARS (Joint Surveillance Target Attack Radar System) and UAV systems. The CGS receives, stores, processes, correlates, disseminates, and displays in near-real time the radar imagery from the U.S. Air Force Joint STARS E-8C aircraft providing the deep and wide ground picture. The CGS simultaneously displays—

- Collateral-level SIGINT reports received from the Intelligence Broadcast Service (IBS) via its Joint Tactical Terminal (JTT).
- Video imagery and telemetry from Army and Air Force UAVs.
- Imagery products from U-2 and Airborne Reconnaissance Low (ARL) platforms.
- Fire-control radar freeze-frame pictures from APACHE Longbow.

The CGS is obviously a crucial resource in the BCT's ISR effort.

The final component of the MI Company is a robust **Tactical HUMINT Platoon**, composed of four organic teams of four soldiers each. Every team has three 97E (Human Intelligence Collector) and one 97B (Counterintelligence Agent) soldiers to provide a combination of HUMINT and CI expertise. Four additional teams will augment the four organic teams once they know the area of operations. This ensures the appropriate linguist skills are available upon deployment.

The BCT Intelligence Structure: RSTA Squadron

The most unique aspect of the IBCT is the formation of an organization dedicated to information collection and support to SA. Unlike existing brigades, it has a **Reconnaissance, Surveillance, and Target Acquisition** (RSTA) **Squad-**

ron composed of three Ground Reconnaissance Troops and a Surveillance Troop. The Reconnaissance Troops provide conventional ground reconnaissance enhanced with LRAS3 sensors and organic mortars for self-protection. Most interesting is the formation of a Surveillance Troop composed of a Troop headquarters (commanded by an MI Captain) and three platoons: a UAV Reconnaissance Platoon, a Ground Sensor Platoon, and an NBC (nuclear, biological and chemical) Reconnaissance Platoon (not addressed here).

The **UAV Reconnaissance Platoon** provides the IBCT with an organic RSTA capability. Although the platoon is part of the RSTA Squadron, it will provide electro-optical, infrared, and communications-relay support to the BCT commander.

A significant new idea is the formation of a **Ground Sensor Platoon**. This organization is a start toward a future capability that provides the ability to monitor multiple ground sensors remotely from a single receive suite. For example, the radar and REMBASS II sensors can be anywhere on the battlefield and we can remotely receive the digital signals from the sensors. Those sensors are now hand-emplaced but in the future, their emplacement could be from the air or by robotic platforms. Today, the ground sensor platoon includes three squads containing a Prophet ground SIGINT team and a consolidated GSR and REMBASS II team. While the objective is to combine all three receiver-processors into one package allowing an operator to receive, process, and fuse three distinct collection results on a single processor remotely from the sensor, today we have two separate systems. Prophet will receive the SIGINT information, while another system will receive and process the data of the radar and REMBASS II sensors.

Yet another compelling concept is the idea of embedding a "tactical questioning" capability in the conventional reconnaissance squads of the three Reconnaissance Troops. Organically assigned tactical HUMINT soldiers with each reconnaissance squad—trained with the appropriate interrogation skills—will provide initial tactical questioning of the local populace during squad operations. This adds to the capabilities of the HUMINT platoon in the MI Company by providing the ability to tip off and cue potential sources for further exploitation. Recent operations have shown the utility of having a trained soldier available during SSC and stability and support operations. The embedded MI soldiers will provide that expertise at the squad level.

Conclusion

The IBCT is the initial step in the transformation process. It provides a significant improvement to support situational understanding and whole spectrum operations through its ability to perform distributed collaborative analysis and ISR integration. Work continues as we reorganize the division and corps structures to achieve General Shinseki's vision to provide deployable, lethal, and full spectrum forces of the future. The U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH) continues to be "Out Front" in the transformation effort. We are ensuring that intelligence remains the key to achieving success in combat, no matter what its form, as we transform the Army into the force of the future.●

Endnote

1. The FBCB2 computer's primary function is to send and receive automatic position location reports derived from its interface with the Global Positioning System, and to send and receive C² message traffic via digital over-the-air radio transmissions. The heart of FBCB2 is a small laptop computer mounted in each vehicle or carried by dismounted soldiers. This portability allows the soldiers to automatically send and receive position location reports and C² message traffic, including graphical overlays. The tactical internet (TI) is the network of radios and the routers that provide the linkages to connect the myriad FBCB2 platforms across the unit.

Major Ted Martens currently serves as Chief, Transformation Team, within the Concepts and Requirements Division of the USAIC&FH Directorate of Combat Developments. His previous assignments have included the 3d Armored Division, the 101st Airborne (Air Assault) Division, the 704th MI Brigade, and Special Operations Command–Korea. He holds a Bachelor of Science degree from the University of Illinois. Readers can reach Major Martens via E-mail at martenst@huachuca-emh1.army.mil and telephonically at (520) 533-3325 or DSN 821-3325.

Share Your Photographs

MIPB **requests that our readers send photographs of MI operations, equipment, and exercises; we will use them to enhance your articles. All photographs should be copyright free. Please send a brief description of the action in the photograph, identify the people and equipment, and include the photographer's full name and rank, unit, and mailing address. The photos can be color or black-and-white, and they should be clear and in focus. Digital photos should be 300 dots-per-inch or better resolution. Provide a return mailing address and we will return the photos if so requested. Thank you!**

The Interim Division

by Chief Warrant Officer Three David L. Gosinski, Jr.

Our fast-paced times continue to present today's Army with many challenges. How can we perform predictive intelligence on an opponent that is by definition unpredictable? We are increasingly engaged in shaping the national security environment through a variety of operations around the globe. While these operations are often small scale, their frequency is increasing and their scope is often broader than our training. Another challenge is in attempting to maintain our technological advantage by harnessing and applying information technology (IT) in a world where Moore's law[1] makes our computers virtually obsolete every 18 months. Today, the Army is pursuing rapid and radical change in doctrine and organizational structure to meet these challenges and fill gaps that exist in our force so we can succeed in the increased tempo and variety of missions. The Interim Division (I-Division) is a step toward the Army's goal: the "Objective Force," a design intended to meet the challenges of this new environment.

Why Change?

Our National Security Strategy still demands a force that can deter and if deterrence fails, win two major theater wars. However, small-scale contingencies (SSCs) and stability and support operations are burdening our scarce resources. General Eric K. Shinseki, Chief of Staff of the Army (CSA), first addressed why the Army needs to undertake this change when he said, "[our heavy] *divisions are challenged to get to other contingencies where we have not laid the deployment groundwork...once deployed, it takes significant effort and cost to sustain them.*"[2] Likewise, we have challenges with our light forces because "[they] *lack staying power, lethality, and tactical mobility once inserted.*"[3] The CSA's vision is to transform the Army into a strategically responsive force that is dominant across the full spectrum of operations. The bottom line is that experiences in these SSCs suggest that our heavy forces may be too heavy and our light forces too light to perform tasks to support the full range of operations. A technology-enhanced medium force may be necessary to fill this gap.

> The intention of the Interim Division is to give a CINC an "early" ground offensive option during crises

Coupled with the changing environment is our entry into the information age, which is having a profound effect on the Department of Defense and the Army as a whole. A revolution is taking place, a revolution in military affairs. "[RMA] *occurs when a nation's military seizes an opportunity to transform its strategy, military doctrine, training, education, organization, equipment, operations, and tactics to achieve decisive military results in fundamentally new ways.*"[4] A fundamental shift today is a move from platform-centric warfare to network-centric warfare.[5] NCW is characterized by networked sensors and weapons, virtual collaboration (a concept of moving information, not personnel),[6] a high degree of shared knowledge, and self-synchronization.[7] NCW, enabled by information superiority, has the potential to significantly increase combat power.

A Transformation Task Force

To meet these challenges, the Army has put in place a transformation task force (TF) led by the U.S. Army Training and Doctrine Command (TRADOC). The road to the Objective Force will take us from our initial state (today) through an interim period (2003-2005) until we reach the Objective Force (2008). It has three principal axes:

- The heavy path includes the Force XXI and limited conversion divisions (LCDs).[8]
- The light road considers the light divisions and efforts made through the Joint Contingency Force Advanced Warfighting Experiment (JCF AWE).
- The medium axis focuses initially on the IBCT as the building block of the I-Division, which may be the mainstay of the force by 2005.

The intention of the Interim Division is to give a CINC (commander in chief) an "early" ground offensive option during crises. It will function as part of a corps or under an ARFOR (Army force) as part of a JTF (joint task force) or CJTF (combined JTF). It will be a full spectrum-capable unit suitable for early and forced entry or the initial phases of an MTW (major theater war), but optimized for employment in contingency operations. TRADOC design guidance has suggested that the Interim Division will have the following characteristics:

- Mission tailorable and task organized from both organic division and non-organic EAD

(echelons above division) assets.
- Capable of reconstituting an IBCT from organic components.
- Highly mobile, both tactically and strategically (the goal is a deployment completed in 120 hours by the Objective Force).
- Ready for immediate operations upon arrival in country. There may not be a traditional reception, staging, and onward integration (RSOI) and the tactical assembly area (TAA) will equate to the aerial port of debarkation (APOD) for the I-Division.
- Pre-positioned equipment will be not available. It will have to rely on the 72-hours worth of supplies it has on arrival and the air sustainable push and centrally managed sustainment system. The use of a common platform—the Interim Armored Vehicle (IAV)—will ease the sustainment burden to minimize supply requirements.
- Offensively oriented combined arms organization. It will shape the battlefield using Infantry-centric dismounted, close combat forces networked with supporting fires (to offset any limitations of the IAV).
- Heavily reliant on reach-back (through organic and joint assets) for theater and national resources (information, effects, force protection, and more).

A series of seminars held by the battlefield operating system (BOS) proponents, workshops, and video teleconferences held between the TRADOC centers are shaping the I-Division organization and operational (O&O) concept. Their principal product, the I-Division O&O, will influence doctrine, training, leader development, organization (tables of organization and equipment, TOEs), materiel solutions (systems), and potentially soldiers (military occupational specialties). A computer-aided map exercise (CAMEX) or map exercise (MAPEX) validates each iteration of the O&O. They incorporate the lessons learned and the process continues.

The MI Design Approach

The Concepts Division, Directorate of Combat Developments (DCD), is leading the MI O&O development at the Intelligence Center. We accomplished much of the initial analysis for the MI chapter of the O&O during a seminar held 5-7 April 2000. Participants include subject matter experts from—

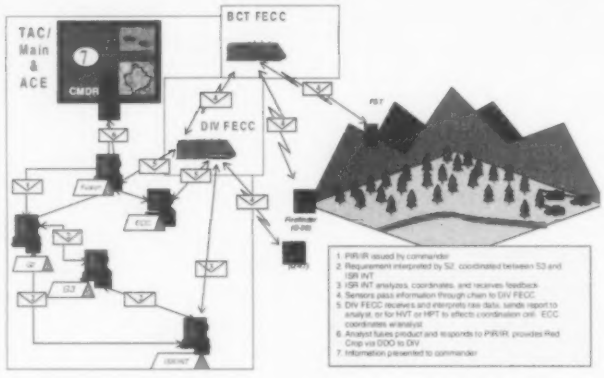
- Battle Command Battle Lab–Huachuca.
- U.S. Army Intelligence and Security Command (INSCOM).
- Doctrine and Concepts Divisions and the Office of the Chief of Military Intelligence from DCD.
- TRADOC System Managers (TSMs) for the Aerial Common Sensor (ACS) and Unmanned Aerial Vehicles (UAV), TSM–Joint STARS (Joint Surveillance Target Attack Radar System), TSM–Prophet, and TSM–ASAS (All-Source Analysis System).
- New Systems Training Office, DCD.

We sought a concept that would support the design guidance and CSA's intent by balancing the intelligence organization to address operations across the spectrum. We optimized the traditional MI organizations for high-intensity conflict, and we needed to add capabilities to address the lower end of the spectrum as well. Our new organization must be able to reconstitute the IBCT's RSTA (reconnaissance, surveillance, and target acquisition) Squadron while still being able to support a division mission through split-based operations. It would have access to external resources and assets to support its mission and be capable of receiving augmentation (such as a National Intelligence Support Team or NIST). We looked for alternative approaches to address tailorability and split-based operations; for example, in evaluating organizational MI structure, we considered the implications of the functional versus support (e.g., direct support) structure.

Using the design criteria, we examined the functions that MI would perform for the division. These functions ranged from the traditional G2 and S2 tasks, collections, sensor processing and functional analysis, all-source analysis and fusion, dissemination, and presentation to newer functions such as ISR (intelligence, surveillance, and reconnaissance) integration and the G2X functions. Each function was a topic for analysis with a good portion of the seminar devoted to sensor processing and functional analysis because these are both manpower-intensive and drive many of the personnel requirements associated with the new structure.

ISR integration is a crucial component; it is the most revolutionary step in MI support to the I-Division

The analytical approach we used to examine the sensor processing and functional analysis requirements was using "mission threads." Each mission thread consisted of a task (for example, integration of field artillery sensor data), and how that information would get from a collector (such as the AN/TPQ-36) through a functional analyst to fusion and ultimately to the commander for presentation (see Figure 1). We examined 16 threads, which covered Intelligence and other BOS sensors that would need integration under this new model. We also examined other functional areas using similar techniques. The



Note: See the glossary on page 58 for expansion of the acronyms.

Figure 1. Sample Mission Thread for Counterbattery Sensors.

cumulative result of this analysis helped build the foundation for the Intelligence chapter of the I-Division O&O. It defined initial tasks and recommended numbers, grades, and MOS requirements, as well as an initial organizational construct.

Our design is for an intelligence component of the I-Division that will be network-centric, relying heavily on communications to perform distributed analysis and intelligence collaboration with other intelligence nodes and sensors (subordinate, theater, and national). It would operate in a split-based fashion. The mission-tailored, small footprint forward would provide only that necessary all-source functional analysis and sensor processing that supports the "now battle" visualization, enhances situational awareness (SA), and supports targeting (focused on the current battle). It would have a robust home-base element in the rear (focused on the future battle) performing distributed analysis and planning.

ISR integration is a crucial component; it is the most revolutionary step in MI support to the Interim Division. Enabled by technology, transparency between echelons will permit the ISR integrator to "see" where organic, subordinate, corps, theater, and national platforms and sensors are focusing or planning to focus. The ISR integrator can request or task coverage to fill gaps and permit sensor synchronization. ISR integration does not just include intelligence sensors; it includes any battlefield surveillance or reconnaissance sensor, for example the AN/TPQ-36 counterbattery radar or the scouts. This integration will enable enhanced SA. Additionally, the MI support would have the following characteristics:

- Tailored forward component that includes sufficient collectors, sensor processors (with direct datalinks to leverage non-organic platforms and sensors), and functional analysts to provide timely and relevant information for targeting and SA.
- IPB (intelligence preparation of the battlefield) development that is continuous, collaborative, and shared across echelons.
- G2X (CI and HUMINT) synchronization and deconfliction between organic, theater, and joint assets.
- Distributed and collaborative analysis where sharing and accepting analysis from other sources reduces analytical redundancy.

Our analysis led us to an organizational structure built around functional lines. It would include a Headquarters and Headquarters Company, an Analysis and Control Company, a Collection Company, and a Sensor Processing Company. Many of the participants felt that this structure would provide the maximum flexibility and tailorability. Still in discussion are the exact definition of the intelligence components within each brigade and the relationship of the MI battalion to the division.

How Would This Organization Fight?

The Interim Division receives an alert. Predeployment garrison activities and training have focused on real-world missions. Analysts have made personal and organizational linkages with critical national and theater (Theater Support Element, Joint Intelligence Center (JIC), and Joint Analysis Center) elements to gain access to databases, other analysts, and sources that would be beneficial during a deployment. (The national linkages include the Defense Intelligence Agency (DIA), National Security Agency, and the National Imagery and Mapping Agency.) During deployment planning, soldiers will exploit linkages established before the contingency. Concurrently, the division dispatches liaison officers to important nodes (e.g., JIC, JTF, combined headquarters) to enhance information sharing. Information provided from external and internal sources will be essential during the 120-hour deployment cycle for planning and SA preceding and during insertion.

Intelligence elements will transition from garrison operations and begin force tailoring based on the

METT-TC (mission, equipment, terrain and weather, troops, and time available and civilians) of the contingency. Intelligence planners will launch with the Early Entry Command Post (EECP), the assault command post, or both deployed concurrently with an IBCT for initial stabilization. A Deployable Intelligence Support Element (DISE) tailored to METT-TC will flow next, consisting of—

- Collectors (such as UAVs).
- Sensor processors (e.g., the Division Tactical Exploitation System (DTES)).
- Necessary all-source analytical, fusion, and integration capability (ASAS Remote Workstation (RWS)).

Until deployment of the DISE, the IBCT principally would handle forward intelligence functions including ISR integration. At the same time, establishment of a mission-tailored home-base support element will provide analytical support and draw on established linkages necessary to support future planning and provide SA enroute. The home-base node reduces the footprint forward and enables a continuous flow of information and production while forces are enroute.

A major risk in this construct is its heavy reliance on communications back to home-base for support to future operations. Once in place, ISR integration of all BOS sensors moves to the division (DISE), which has fully established G2X functions. Sensor processing from organic and theater sensors and platforms is received directly with functional analysis to enhance SA and support targeting performed forward; some elements of data will go to the rear for detailed analysis and future planning. Within the DISE, distributed and collaborative analysis expands laterally and between echelons: a fully networked, integrated intelligence infrastructure is in place.

Conclusion

The I-Division MI component will significantly enhance intelligence support to future U.S. Army contingency operations. Its major force attributes include the following characteristics:

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- Versatility (task organization and training) balanced, trained, and mission-tailored to meet the entire spectrum of operations.
- Lethality enhances support to targeting through ISR integration and direct datalinks, which reduce reporting timelines.
- Survivability through a balanced structure and an increased CI presence to enhance force protection.
- Sustainability because the small footprint forward reduces the deployment and sustainment requirements.

The crucial risk is the heavy reliance on communications to "reach back" for support. ✸

Endnotes

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3. Ibid.

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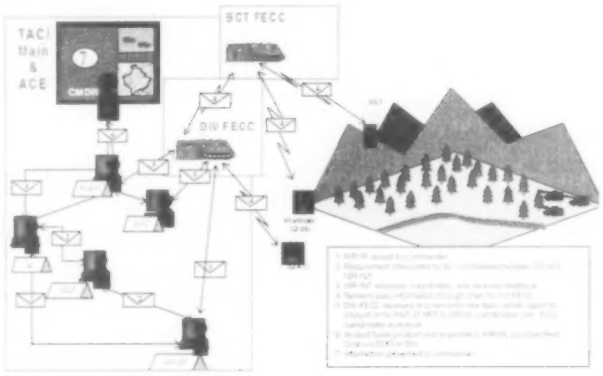

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Military Intelligence Architecture for the Brigade Combat Team

by Major Jeffrey F. Violette and Captain William J. Cater

Interoperability is the cornerstone to achieving information superiority on the battlefield. Architecture is the foundation in which to achieve it during the Army's transformation from platform-centric to network-centric warfare. Intraservice, joint, and coalition interoperability drives us to examine carefully how we build architectures today to meet these demands. The Intelligence Center's Directorate of Concepts and Doctrine (DCD) Concepts Division is addressing these requirements with respect to the Army's transformation by developing operational and systems architectures for military intelligence assets.

Architecture Defined

Architecture products implement the combat commander's visions and concepts by graphically documenting an organization's functions and requirements. Our mission is to develop and continually refine the operational and systems architecture for all MI assets, with a current focus on the Initial and Interim Brigade Combat Teams (IBCTs).

Our architecture development efforts are under the auspices of the Army Enterprise Architecture (AEA). The AEA is an Army-wide information technologies (IT) architecture that describes the relationships among critical Army institutional processes and IT to ensure—

- Alignment of IT requirements with processes.
- Interoperability of Army, joint, and combined organizations and systems.
- Application and maintenance of the standards by which the Army evaluates and acquires new systems.
- Fulfillment of *Clinger-Cohen Act*[1] requirements to develop an enterprise-wide IT architecture.

The AEA has three major components (see Figure 1). They are—

- **Operational architecture** (OA) is the total aggregation of missions, functions, tasks, information requirements, and business rule in support of a warfighting function.
- **Systems architecture** (SA)—the physical implementation of the OA—is the layout and relationships of systems and communications.
- **Technical architecture** (TA) provides the technical guidelines for the implementation of systems upon which we base engineering specifications and assemble common building blocks and product lines.

The Challenge—BCT Architecture Development

Developing a new organizational architecture from scratch to support an initial operating capability in December 2001 poses many challenges. All products must support the need to—

- Maintain a common operational picture (COP) for discussion.
- Capture increasingly detailed views of equipment deployment and interaction.
- Quickly adapt current products to reflect design changes.
- Rapidly affect the requirements determination and force design processes.

OA Development. For the first Initial Brigade Combat Team (IBCT-1), the development of architecture products began with the development of the draft concept. The Army's executive agent for OA, U.S. Army Training and Doctrine Command (TRADOC) Program Integration Office–Army Battle Command System (TPIO-ABCS), began building activity models and high-level operational concept diagrams

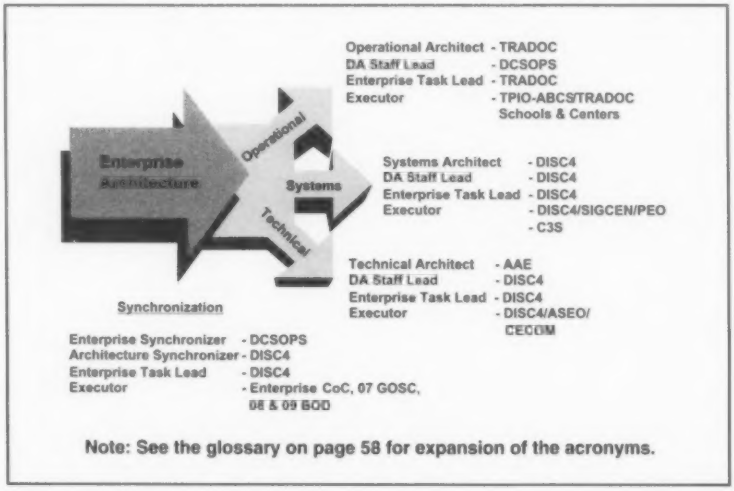

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Figure 1. The Major Components of the Army Enterprise Architecture.

to reflect the missions, functions, and tasks contained in the concept. TPIO-ABCS then staffed these draft products through the proponents and crosswalked them against mission threads to ensure accuracy. Even in draft, these products were invaluable to proponents for identifying inconsistencies and problems with the initial organization and its functions. An important product of the OA is the Information Exchange Requirements (IER) Matrix. IER matrices document what information needs to be exchanged, by whom, and the performance parameters (frequency, precedence, perishibility, etc.) of the information. It is important to recognize that the OA and SA are interdependent. Exaggerating or understating the performance parameters for information exchange between functions can have a extensive impact on an IER materiel solution and can cause a ripple effect throughout the entire process.

SA Development. Normally, SA development starts as soon as the OA defines the organizations. Given the compressed development schedule associated with IBCT-1, however, the Army is developing much of the SA in parallel with the OA. In lieu of an approved OA, we initially used the TRADOC "horseblankets" as a guide to how this unique organization would function and communicate. The Signal Center, as the Army's executive agent for SA, consolidated the proponents' input. We developed our SA in NetViz®, a software package which lets the user "drill down" through many levels and allows the documentation of equipment at the platform level.

TA Development. The Joint Technical Architecture–Army provides standards with which information technology systems must conform. Eventually, we must develop a TA profile for each system shown in the SA to demonstrate adherence with applicable technical standards. U.S. Army Communications–Electronics Command (CECOM) is the Army's executive agent for TA.

Architecture Relevancy. For the MI portion of IBCT-1, the architecture views and data produced by the Intelligence Center are vital for conducting tradeoff analyses and identifying potential problem areas. In the cases discussed below, our architecture development efforts have provided a common framework to both identify problems and document alternatives.

IBCT-1 Architecture Issues

We discuss four examples of the MI architecture issues below. They concern the Tactical HUMINT Platoon, the HUMINT soldiers organic to the RSTA Squadron, the Top Secret Enclave at the Brigade Tactical Operations Center (TOC), and MI assets' reporting chain in the RSTA Squadron.

Tactical HUMINT Platoon (MI Company). We identified a requirement for a long-haul data communications system for the tactical HUMINT teams, operational management teams (OMTs), and the S2X to report and pass data amongst themselves outside of the normal brigade operations and intelligence (O&I) net. Based on the capabilities of the Army's existing systems, we selected the UHF single-channel satellite communications (SATCOM) system AN/PSC-5 (SPITFIRE) to link the teams throughout their 50 by 50 kilometer (expandable to 100 by 100) area of responsibility (AOR). These radios are voice- and data-capable and as SATCOMs are less affected by terrain. Since the tactical HUMINT teams and OMTs do not normally operate near a TOC, and therefore do not have access to a traditional data network, we also had to devise a way to tie these teams into the Tactical Internet (TI). The solution was to access the TI via the Future Battle Command Brigade and Below (FBCB^2) and the Enhanced Position Location Reporting System (EPLRS). This allows teams to report over the command and control network (C^2) and maintain situational awareness while enroute throughout the AOR.

HUMINT soldiers "embedded in" the Reconnaissance Squads (RSTA Squadron). In IBCT-1, a counterintelligence agent (military occupational specialty 97B) is assigned to each of the reconnaissance squads. The IERs identified their need to pass and receive data through intelligence-specific HUMINT channels as well as through their normal chains of command. This required a lightweight, long-range, data radio system. Sheer numbers (36 total) precluded the use of UHF single-channel SATCOMs. The alternative we identified was an HF radio system with a proven ability to pass data: the PRC-137. The Battle Command Battle Lab–Huachuca believes this radio has better data performance than the current PRC-138. While there is no a decision yet, the requirement for a long-haul lightweight radio system for the HUMINT soldiers in the reconnaissance squads still exists. For the follow-on BCTs, we envision using a high data-throughput, ad hoc networking radio to enable these soldiers to pass reports and images via their Individual Tactical Reporting Tool (ITRT).

Top Secret/Sensitive Compartmented Information (TS/SCI) Enclave at the Brigade TOC. The planned migration of MI communications requirements to the Signal Corps must address the fact that the Signal Corps does not currently provide Joint Worldwide Intelligence Communications System (JWICS) connectivity at its worldwide, strategic theater-entry-point sites, nor does it have equipment

accredited to tie into the current TROJAN network. Today, the only viable solution is to use "tunneling" devices with dedicated satellite assets to provide the reach-back connectivity to the TROJAN network.

Reporting chain of MI assets within the RSTA Squadron. How MI assets on the battlefield report in a direct support (DS) or general support (GS) role has never been an issue before since there always existed a technical MI chain through which to report. Within the IBCT's RSTA squadron structure, however, this chain does not exist. While providing no significant technical problems, this structure requires the development of new tactics, techniques, and procedures (for both MI and RSTA units) to manage these collection assets effectively.

Conclusion

The architecture products described in this article provide invaluable tools for rapidly designing, documenting, and implementing Army Transformation guidance. From establishing critical functions (OA) through their physical implementation (SA), architecture affects all facets of the IBCT development process. ●

Endnote

1. The Cohen-Clinger Act of 1996 added national security systems under the purview of the corporate information officer. These systems involve intelligence, cryptological, and C² activities, as well as weapons system components critical to fullfillment of military intelligence missions.

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INSCOM Units Converting to TOE Structure

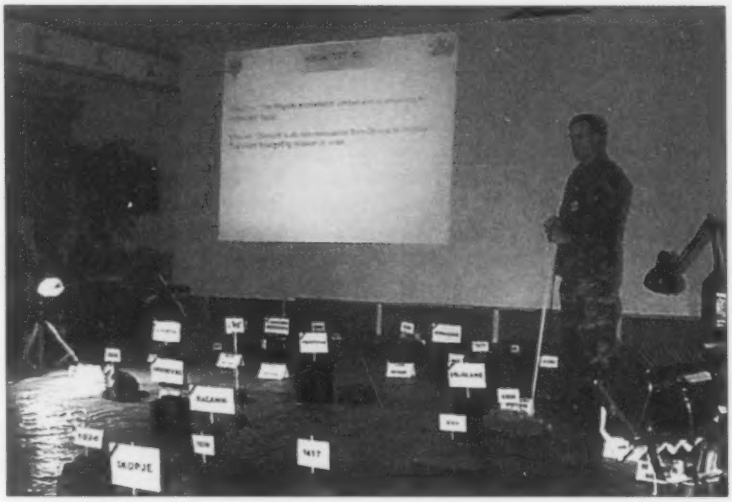
A number of U.S. Army Intelligence and Security Command (INSCOM) units converted from TDA (table of distribution and allowances) to TOE (table of organization and equipment) units on 16 June 2000. This change is the first of a three-phase conversion of the command to a TOE structure that will occur in the next two years. The change should not affect daily operations, but will be apparent in the units) new designations, flags, guidons, colors, and insignias.

TDA Designation	TOE Designation	Location
702d MI Group	116th MI Group	Fort Gordon, GA
—721st MI Battalion	—206th MI Battalion	Fort Gordon, GA
—748th MI Battalion	—314th MI Battalion	Fort Gordon, GA
703d MI Group	—115th MI Group	Schofield Barracks, HI
—A Company	—406th MI Company	Schofield Barracks, HI
—B Company	—407th MI Company	Schofield Barracks, HI
—C Company	—408th MI Company	Schofield Barracks, HI
—D Company	—409th MI Company	Schofield Barracks, HI
718th MI Group	—108th MI Group	Bad Aibling, Germany
—Operations Company	—401st MI Company	Bad Aibling, Germany
713th MI Group	—109th MI Group	Harrogate, England
—Operations Company	—404th MI Company	Harrogate, England
(501st MI Brigade)		
—751st MI Battalion	—527th MI Battalion	Camp Humphreys, Korea
(500th MI Brigade)		
—750th MI Detachment	—403d MI Detachment	Misawa, Japan

by Colonel William A. Carrington and Major Jerry L. Schlabach

The mark of the post-Cold War era has been a variety of threats, a variety of locations, a variety of situations (cultural, political, et cetera), and unpredictability as to what we're going to face. Therefore, we must have the organization and people who can handle these future missions of unknown types. The challenge of this organization (the Initial Brigade Combat Team) is to have leaders and soldiers who can solve problems that they don't know in advance.

—Major General James M. Dubik, Fort Huachuca, Arizona, 23 March 2000.



The MI–Signal "Rock Drill" for the Initial Brigade Combat Team

From 20 to 24 March of this year, more than 100 subject matter experts (SMEs) and VIPs convened at Fort Huachuca, Arizona, to conduct the MI–Signal "Rock Drill" for the Initial Brigade Combat Team (IBCT). **The IBCT is a fundamentally new Army organization that will serve as the basic building block for the transformation of the entire Army**. This successful analytic event is already enabling U.S. Army Training and Doctrine Command (TRADOC) to understand much better the issues associated with developing and fielding the first IBCT next year at Fort Lewis, Washington. Used in conjunction with other analytic events this year, this experience will enable the Army to better appreciate the design implications of the new force, and to deploy a top quality organization capable of responding to 21st century threats.

What is the Initial Brigade Combat Team?

The organization and operations (O&O) document for the IBCT describes the fundamental concepts used in the design of the IBCT. This document guides TRADOC planners and analysts as they develop new tables of organization and equipment (TOEs); training courses; doctrine; tactics, techniques, and procedures (TTP); and even new equipment for the IBCT. The first version of the O&O, published in December 1999, explains how the design of the new force is such a significant departure from the design of traditional Army units.

> One of the striking features of the IBCT is its dependence upon ISR operations

For example, the IBCT can rapidly respond to crises in timelines more normally associated with light brigades. A small-scale contingency (SSC) environment is a mixture of a stability and support-type operation and a major theater war (MTW). Traditional light forces can respond to an SSC within 96 hours, but lack the firepower necessary to deal with the threat of a conventional attack inherent in SSC missions. Traditional heavy units retain the requisite firepower, but their force structure does not readily lend itself to SSC-type force projection operations during crises. The IBCT will be capable of responding to a mid-level SSC challenge in a timely manner with an adequate amount of firepower and expertise. This will enable the IBCT to stabilize the crisis into a classic stability and support operations mission, or to defend itself upon escalation to an MTW.

One of the striking new features of the IBCT is its dependence upon intelligence, surveillance, and reconnaissance (ISR) operations, to include intelligence "reach back" to sanctuary units and organizations. According to Lieutenant General William M. Steele, the commander of the U.S. Army Combined Arms Center at Fort Leavenworth, Kansas, *"this organization is unique in that it will spend more time looking for the enemy than fighting the enemy."* Major General James M. Dubik, the Army Transformation

Force Commander at Fort Lewis, Washington, stated:

> *One of the things we're trying to do with this [IBCT] O&O is move from the current paradigm of "make contact with the enemy and then maneuver the force," to "understand the situation, maneuver the force, and make contact at our place and time of choosing." ISR is a key element in that shift. We can't make the shift unless we get the ISR part right.*

To respond to this new information and intelligence challenge, the IBCT enjoys an extraordinary (by traditional standards) amount of ISR assets. The brigade will possess an organic Reconnaissance, Surveillance, and Target Acquisition (RSTA) Squadron, as well as an independent MI Company. The RSTA Squadron is different from a traditional cavalry unit in that the RSTA unit will not conduct combat operations (e.g., screen, guard, or cover) unless augmented. The RSTA Squadron will employ a highly capable set of organic assets, to include—

- Three RSTA Troops containing 27 RSTA squads on 27 squad vehicles. This is enough to conduct simultaneous reconnaissance of a telling 18 named areas of interest (NAIs), according to the U.S. Army Armor Center, the proponent for the design of the RSTA squadron.
- A human intelligence- (HUMINT) trained soldier in each of those 27 squads to conduct "tactical questioning" and to support "multidimensional reconnaissance operations."
- A Tactical Unmanned Aerial Vehicle (TUAV) Platoon in a separate Surveillance Troop. This unit's four TUAVs can provide the brigade commander 12 hours of coverage per day.
- A Ground Sensor Platoon, also in the Surveillance Troop. This platoon will possess Prophet ground SIGINT (signals intelligence) systems, as well as ground surveillance radar (GSR) and Remotely Monitored Battlefield Sensor System II (REMBASS II) systems.

The separate MI Company will add to the IBCT commander's ISR arsenal by providing—

- A Tactical HUMINT Platoon capable of conducting in-depth HUMINT operations.
- A Common Ground Station (CGS) to provide a Joint STARS (Joint Surveillance Target Attack Radar System) downlink, TUAV video, and the intelligence from the Commanders Tactical Terminal (CTT).
- An ISR Integration Platoon to support the S2 in synchronizing ISR operations.
- An ISR Analysis Platoon to conduct exploitation of ISR data.
- An "S2X" to conduct technical HUMINT coordination and exploitation.
- Significant abilities to conduct "reach back" to sanctuary intelligence-support organizations.

Taken as a whole, these ISR assets provide the IBCT commander with an unprecedented capability for acquiring situational awareness during an operation.

What Was the Rock Drill?

There are always implementation issues with so radical a departure from traditional unit designs. The MI–Signal Rock Drill enabled TRADOC to intelligently explore the implications of the new design. It accomplished this using essential elements of analysis (EEAs) as described in Figure 1.

These EEAs enabled SMEs to provide focus and context to in-depth discussions on the war-gaming of vignettes. For example, Sergeant First Class Patrick

Photograph courtesy of SPC John Sheridan.

Brigadier General Paul D. Eaton (Fort Benning), Major General John D. Thomas, Jr. (Fort Huachuca), and Major General James Dubik (Fort Lewis) receive the results of the MI–Signal Rock Drill.

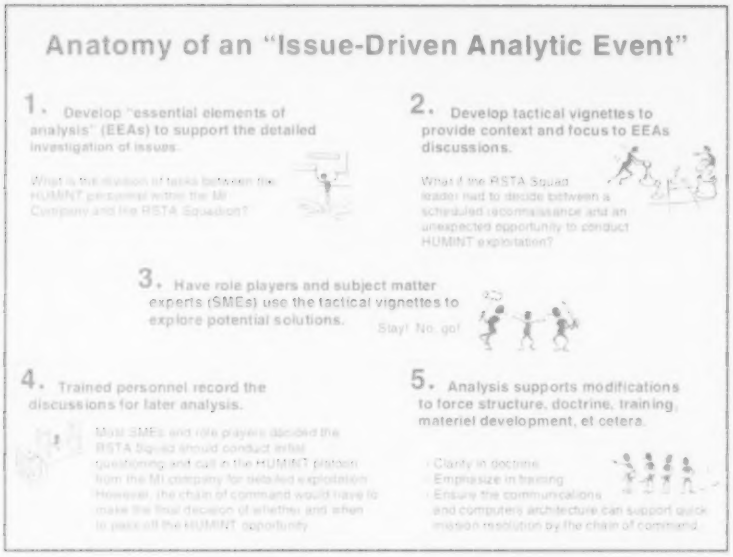


Figure 1. Anatomy of an Issue-Driven Analytic Event.

Palmer, an SME in the use of UAVs, provided his expertise during a TUAV vignette played upon a large floor map (see the photograph on page 15).[1]

The Rock Drill provided even more context to the discussions through the use of a "digitized venue" which demonstrated how currently deployed technology will assist the IBCT in its SSC mission (see Figure 2). The digitized venue used U.S. Army Intelligence Center and Fort Huachuca personnel to replicate and demonstrate an IBCT tactical operations center, the RSTA Squadron TOC, and several prominent collection systems.

Finally, during the last two days of the Rock Drill, the SMEs and role players presented the results of their analysis to a panel of General Officers. These officers represented the IBCTs at Fort Lewis, the U.S. Army Signal Command, National Security Agency, U.S. Army Intelligence and Security Command, TRADOC, U.S. Army Forces Command, the Defense Intelligence Agency, some additional centers and schools, and other interested organizations.

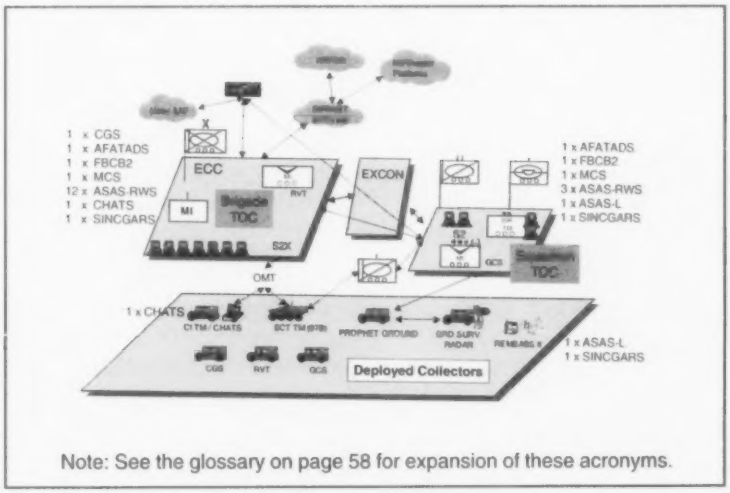
What Were the Biggest Issues?

The Rock Drill highlighted a number of challenges for TRADOC to work. They include insights and observations on TUAVs, HUMINT, the Ground Sensor Platoon, analysis and reach-back, and ISR integration and planning.

TUAV. The TUAV is the brigade comander's asset, and the brigade will predominantly employ it against the commander's critical information requirements (CCIRs). The RSTA Squadron staff will develop the ISR (flight) plan for the TUAV with respect to the remainder of squadron operations. However, under some circumstances, the brigade commander's CCIRs are changing so fast that the only asset responsive enough will be the TUAV Platoon itself.

In these dynamic situations, the brigade TOC may exercise tactical control of the TUAV. Diverting a TUAV from its scheduled flight plan could "damage" the brigade's ISR plan, which will require immediate collaborative planning on the part of both the brigade and squadron TOCs to "heal" the "hole" in the ISR plan and satisfy the CCIRs.

HUMINT. The multidimensional nature of the IBCT's RSTA squads, capable of both HUMINT and traditional reconnaissance missions, will sometimes require mission reconciliation by the chain of command. In other words, the chain of command may have to delay or divert planned reconnaissance of an NAI due to an opportunity to acquire, develop, or exploit a HUMINT contact (potential source).



Note: See the glossary on page 58 for expansion of these acronyms.

Figure 2. Rock Drill Digitized Venue.

The development, dissemination, and understanding of the brigade commander's intent will assist the subordinate chain of command in taking the initiative to resolve the competing HUMINT missions (initiative within intent). Just as for the TUAV, such diversions of a RSTA squad will require the RSTA Squadron, and perhaps the brigade TOC to assist in the readjustment of the ISR plan.

Due to the limited experience associated with the rank structure, the HUMINT personnel organic to the RSTA squads will be capable of tactical questioning and a limited degree of exploitation. The IBCT will need to employ the Tactical HUMINT Platoon from the MI Company for more in-depth exploitation and other traditional HUMINT activities, such as source operations.

Ground Sensor Platoon. The Ground Sensor Platoon provides a 24x7 all-weather SIGINT capability to the IBCT. The substantial surveillance capability resident in the GSRs and the Remotely Monitored Battlefield Surveillance System II (REMBASS II) supplements that capability.

The IBCT will have to work hard to develop battle drills to cross-cue SIGINT sensors with one another, with the GSR and REMBASS systems, with other IBCT assets (e.g., TUAV), and with SIGINT assets external to the brigade. TRADOC will have to assist in developing the doctrine and TTP to guide and complement these battle drills.

Analysis and Reach-Back. Due to significantly more ISR assets within this brigade, as well as an enhanced capability to "reach-back" to theater and national assets, the IBCT will have a considerably larger volume of information to analyze than does a conventional brigade. The necessity to conduct link and pattern analyses to determine the organization and training of modern SSC threats further magnifies the S2's many analysis tasks. This analysis was unnecessary during the Cold War because we already knew and understood the threat of Soviet-style armies.

The SSC situations this brigade is likely to face will require some basic changes to the TTP application of the MDMP (military decisionmaking process) and the IPB (intelligence preparation of the battlefield) process. Future IBCT operations are less likely to be similar to a football game, where there are numerous pauses in activities that enable planners to synchronize actions for the next play. Operations in the future are more likely to be like a basketball or rugby game, where play is continuous. This will cause the planning process (IPB and MDMP) to be continuous and dynamic too.

No one echelon can conduct all the analysis the unit requires. Fortunately, this brigade will have a virtual analytic team in general support (GS) of IBCT operations. This support for the Initial Brigade comes through the SIPRNET (Secure Internet Protocol Router Network) and JWICS (Joint Worldwide Intelligence Communications System) connectivity provided by the TROJAN SPIRIT (TROJAN Special Purpose Integrated Remote Intelligence Terminal). The SMART-T (Secure, Mobile, Anti-Jam, Reliable Tactical Terminal) and STAR-T (Super-High-Frequency (SHF) Triband Advanced Range-Extension Terminals) provide reach-back for the Interim Brigade.

When determining how much analytic support a reachback agency can provide the IBCT, it is important to consider three factors:

- Can the reachback agency properly understand the METT-TC (mission, enemy, terrain, troops, and time available and civilians) **context** of the IBCT commander's CCIR?
- Can the reach-back agency provide the necessary amount of analytic **focus** in support of the IBCT (with respect to their other analytic requirements)?
- Can the reach-back organization provide the intelligence in a **timely** enough manner to support the commander's decisionmaking process?

Also when determining how much analytic support a reach-back agency can provide to the IBCT, it is important to consider command and support relationships. Although the brigade S2 can now talk directly with the Central Intelligence Agency (skip-echelon communication), it may not be prudent to do so. This is particularly true when requesting national collection missions—U.S. Army Forces (ARFOR), joint task force (JTF), and theater SOPs (standing operating procedures) will provide guidance on how the IBCT is to coordinate for appropriate collection support.

In general, the ARFOR ACEs (analysis and control elements) will provide analytic and intelligence coordination overwatch in general support of the IBCT S2s. The IBCT and the supporting ARFOR ACE must exercise their links and coordination on a daily basis, even in peacetime. However, the ARFOR ACEs do not retain a regional focus, so regional analytic agencies (e.g., joint intelligence centers (JICs)) will provide significant intelligence support to the IBCT during early entry.

Even within the IBCT, no single echelon will be able to accomplish all of the analytic tasks the unit would expect to face during operations in an SSC environment. Fortunately, the "map collaborative overlay" (MCO) functionality within the All-Source Analysis System (ASAS) Remote Workstation

There is a symbiotic relationship between analysis and ISR integration and synchronization

(RWS) provides the brigade with collaborative technology. This technology enables the battalion, squadron, and brigade S2s with the ability to share their threat situation maps.

The S2s will have to develop and work SOPs to resolve differences of analytic opinion within the areas of overlapping interest. However, experience from the 4th Infantry Division (Mechanized) suggests that if they do work to distribute and synchronize the analytic workload, the collaborative analysis will lead to a common operational picture (COP) which will greatly facilitate coordination among the battalions, the squadron, and the brigade.

There is a symbiotic relationship between analysis and ISR integration and synchronization. Quality and timely analysis enables quality and timely planning. The commander, S3, and S2 have to work hard to drive this intelligence cycle to ensure the unit has the proper situational understanding to support the maneuver necessary to engage the enemy at a time and place of our choosing. This must replace our old paradigm of "first make contact with the enemy, and then maneuver the force."

ISR Integration and Planning. This brigade is "information-oriented" rather than force- and terrain-oriented. This creates an additional challenge in planning for multidimensional reconnaissance operations. "Multidiscipline means more than just traditional BOSs," as MG Dubik said.

Continuous ISR planning includes three elements—

- Requirements.
- Asset visibility.
- Asset effectiveness.

The brigade TOC establishes requirements (e.g., named areas of interest, or NAIs), while the squadron TOC manages the employment of its ISR assets against those requirements (e.g., the TUAV flight plan and which RSTA squad operations target which NAIs). Both TOCs work together to determine asset effectiveness.

However, the IBCT's likely venues are situations in which the commander's CCIRs and specific requirements will change at extremely fast rates. In addition, the brigade TOC will always retain a better understanding of the total situation due to significantly better communications and processing capabilities at the brigade level. This creates a requirement for continuous collaborative planning between the brigade and squadron TOCs.

Since we do not hold reconnaissance in reserve, evolving situations will require the IBCT to dynamically retask and cue ISR assets

For example, the brigade may develop a new NAI that requires immediate attention. Thinking that a TUAV on an ongoing mission is the only asset responsive enough to cover the NAI, the brigade may suggest that the squadron divert the TUAV. However, because of better understanding of its collectors' situations, the squadron counters with a plan to divert a nearby RSTA squad from a lower priority NAI to the new NAI. This alternative plan can occur before airspace coordination for the diversion of the TUAV. The IBCT will continuously conduct this kind of collaborative planning.

Over the years, MI Branch has developed a distinction between "missions" controlled through command and S3 channels, and "technical tasks" controlled through S2 and MI unit channels. We need to leverage that experience as we figure out how to do this with the RSTA squadron for the IBCT. For example, the S2 may tell the ground Prophet system which frequencies to cover, but if it is not collecting properly, the commander may have to get involved to reposition the system. In other words, the chain of command must get involved and take responsibility for collection, but still be responsive to requirements changes handed down through S2 and technical channels.

Since we do not hold reconnaissance in reserve, evolving situations will require the IBCT to dynamically retask and cue ISR assets from their preplanned NAIs. Diverting an asset from its preplanned NAI position will "damage" the brigade's ISR plan, which will require immediate collaborative planning on the part of both the brigade and squadron TOCs to "heal" the "hole" in the ISR plan and optimize satisfaction of the commander's CCIRs. Diversion of a high-priority asset to an immediate retasking may cause a "ripple" effect as the brigade and squadron continue to shuffle assets against requirements. In this way, the IBCT ensures that its ISR assets focus on the requirements with the highest priorities and that the commander is consciously accepting risk in not covering the lower priority NAIs.

What Happens Next?

We have resolved some of the issues identified in this Rock Drill and

are working toward resolution of the others. We will record the TTP solution in doctrine and integrate it into institutional training courses. Future analytic events will further investigate other issues and conceivably merit additional changes to the IBCT design. Because of this successful analytic event, the Army will field an even better ISR system as part of the new IBCT.●

Endnote

1. In the title photograph, SFC Patrick Palmer uses a floor map to drive wargaming of TUAV vignettes. Photograph courtesy of SPC John Sheridan.

Colonel William Carrington is currently the Deputy Director of the Battle Command Battle Lab–Fort Huachuca. On 12 July, he will assume command of the 111th MI Brigade. He has commanded A Company, 309th MI Battalion, and the 205th MI Battalion in Hawaii. He ran the G2 Workstation and the capstone simulation exercise for MI Officers Advance Course. COL Carrington has a Bachelor of Science degree in Engineering from the U.S. Military Academy and a Master of Science degree in Computer Science from the University of Connecticut. Readers may contact COL Carrington via E-mail at carringtonw@huachuca-emh1.army.mil.

*Major "Stu" Schlabach served as the 9th Infantry Regimental S2 during Operation JUST CAUSE and as a G2 Planner for TF Hawk during operations in Albania and Kosovo. He is a co-author of the current **FM 34-2, Collection Management and Intelligence Synchronization**; the original **FM 34-8, Combat Commander's Handbook for Intelligence**; and the 1994 version of **FM 34-130, Intelligence Preparation of the Battlefield**. He was instrumental in the 1992 overhaul of the MI Officers Advance Course, the 1994 overhaul of the 96B10 (Intelligence Analyst) course, and the development in 1995 of the first ASAS Leader's Course. In 1997, he acquired a Master of Science degree from the University of Illinois in Artificial Intelligence and Human-Computer Reasoning. He is currently the Science and Technology Advisor for the Fort Huachuca Battle Command Battle Lab. You may contact Major Schlabach via E-mail at schlabachj@huachuca-emh1.army.mil.*

Analysis and Control Team—The New Force Multiplier

by Chief Warrant Officer Two Victor J. Diaz

It is only the enlightened ruler and the wise general who will use the highest intelligence of the army for purposes of spying and thereby they achieve great results.

—Sun Tzu, Art of War

U. S. Army photo.

In the heat of battle at the NTC.

National Training Center (NTC) in the Heat of Battle

While sitting in the "Star Wars" building waiting for the start of the AAR (after-action review) for the previous mission, the Brigade S2 nervously looks at his watch. The Brigade Commander, sitting in the first row, turns to the nervous S2 and says, *"Two, I need you to bring me up to speed on the current situation as soon as we get back to the TOC (tactical operations center)."* The S2 quickly responds, *"Roger, Sir."* Wondering if he left sufficient instructions for his assistant, the S2 becomes even more preoccupied with the next mission and begins to sweat uncontrollably.

Meanwhile, somewhere in the middle of an arid maneuver area at the National Training Center (NTC) in Fort Irwin, California, a team of five soldiers, led by a new first lieutenant and a young sergeant, are feverishly preparing for the next mission. The Analysis and Control Team (ACT) supporting the S2 is diligently using all available resources to develop multiple enemy course of action (COA) templates. It is also assessing the opposing force's (OPFOR) current composition and disposition, and synthesizing all the subordinate reconnaissance and surveillance (R&S) plans for the upcoming mission.

Approximately four hours into the change of mission, the brigade S2 races back to the brigade TOC, cursing the system for wasting so much of his precious time in an AAR when he could have been preparing for the next mission. The S2 quickly calls for his assistant as he arrives in the brigade TOC. *"Bring me all the information we have on the OPFOR's disposition, current strength, and...."* Before the S2 can complete his sentence, the ACT Chief responds, *"Sir, we took the liberty of preparing the mission analysis for the defense, and we have also prepared the necessary products for the battle update brief (BUB), wargame, and rehearsals."* Thankful, the S2 quickly refines the OPFOR's probable COA based on new intelligence holdings, and provides an initial enemy situation brief to the Commander, S3, Fire Support Officer, and Air Liaison Officer. Using the S2's refined template as a foundation, the staff quickly begins to wargame, rehearse, and execute the upcoming mission with flawless precision.

Conceptualization

Could this scenario be further from the truth? For some S2s, the ability to leverage the capabilities of an ACT is a difficult task. Recent findings published in the JRTC (Joint Readiness Training Center) and NTC trends reports for 1997 and 1998 illustrated how the Intelligence battlefield operating system (BOS), in particular the S2s and ACTs, needed emphasis on their working relationships.[1] The study also concluded that the MI battalion's ACT, *"lacked the basic skills necessary to provide the commander with consistent predictive analysis based on incoming intelligence reports."* This truth, however painful, may be a direct result of insufficient information on how an ACT should operate and function, and what this analytical team can bring to the fight.

As I began my research, I found that there is little information on the ACT in Army regulations and field manuals (FMs). In both **FM 34-25-3, All-Source Analysis System and the Analysis and Control Element**, and **FM 71-3, Armored and Mechanized Infantry Brigade**, the ACT was only described as a derivative of the IEW (intelligence and electronic warfare) support element (IEWSE) and MI company team.[2] According to the FMs, the ACT is to

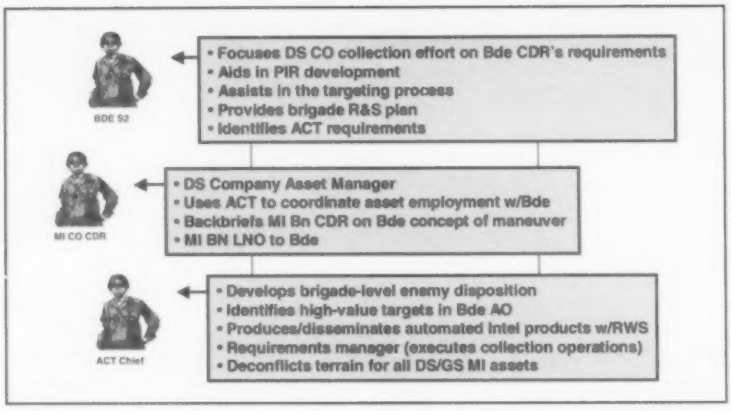


Figure 1. Brigade Intelligence Responsibilities.

provide the brigade S2 with automated intelligence processing, analysis, and dissemination capabilities. This lack of information, coupled with the collective impression that the ACT's primary function was IEW asset management, led to a concerted effort in the 103d Military Intelligence Battalion and the Analysis and Control Element (ACE) to establish clearly defined roles and responsibilities for the ACT and its team members. (See the following article by Lieutenant Colonel Stephen Perkins for additional information.) Figure 1 clarifies the intelligence responsibilities of the brigade S2, Direct Support (DS) MI company commander, and the ACT chief.

ACT Mission

The ACT is simply a "mini ACE" for S2s. Maneuver brigades no longer face a single, well-defined conventional threat. Brigades must be able to conduct missions in peacetime, conflict, and war against threats ranging from regional powers in Southwest Asia to warring factions in Bosnia-Herzegovina and Kosovo. The conduit for the S2's overall success is the ACT, an analytical team that the brigade or battalion should fully integrate into the S2 section, as the ACE is integrated in the division G2 shop (see Figure 2). As a pivotal player in the brigade analytical effort, the ACT uses a wide variety of automated systems and intelligence disciplines to provide the commander with a timely, relevant, and accurate picture of the enemy.

Intel XXI Oversight

Our problem with the ACT was not unique. Throughout the intelligence community, the integration of ACTs with the brigade S2 receives scant attention. For example, one of the recommendations from the Intel XXI study conducted in June 1999 was to adjust the MI Force XXI ECB (echelons corps and below) design based on Intel XXI findings.[3] The Intel XXI proposal includes introducing several new or improved capabilities through the Force XXI model. Changes or improvements cited in the Intel XXI findings include increasing analytical capabilities for the brigade and battalion S2 by adding Reserve intelligence officers to S2 sections. A better answer, however, would have been to emphasize the importance of the ACT in the brigade intelligence fight.

ACT Redefined

Based on a common misconception that the ACT was no more than an asset manager, the ACT and MI battalion focused little time in developing both garrison and deployed tactics, techniques, and procedures (TTP). With numerous NTC rotations and real-world contingency operations, our brigades and the S2s had little time to develop a deliberate and cooperative relationship with the MI ACT. Therefore, the analysts in our ACTs lost their analytical edge, which made it harder to establish the level of confidence required in an intelligence support team. Add to this loss of skills the continual demand for intelligence analysts (96Bs) in both Bosnia and Kosovo and one can see the significant challenge that faced the 103d

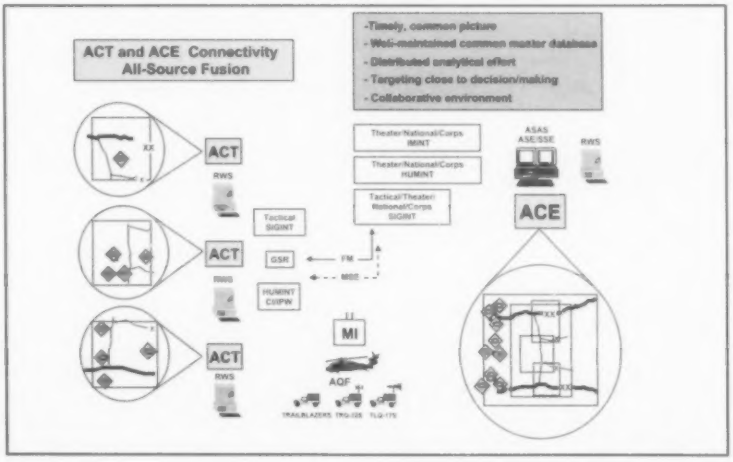


Figure 2. All-Source Integration—ACT and ACE Connectivity.

MI Battalion. The Battalion's ACE took on the arduous task of revitalizing the ineffective ACT concept. Implicit in this task was defining roles and responsibilities for the ACT in both garrison and field duties, establishing individual and collective tasks, and implementing a comprehensive training strategy using the eight-step training model.[4] Figure 3 further defines the ACT's roles in garrison and the field.

ACT Roles and Responsibilities

Visualization of a clear and distinct link between the S2 and the ACT was simple. The brigade S2 is the

In Garrison

Executes real-world contingency planning—

- Produce and disseminate collateral update (Red Book)
- Produce Division Ready Brigade (DRB-1) assumption briefings
- Produce threat and force protection briefings
- Develop country studies

Facilitates integration and dissemination of intelligence from brigade to division and from division to brigade—

- Brigade RFI (Request for Information) managers
- Integrate intelligence into brigade MDMP (military decisionmaking process) and wargaming
- MI battalion liaison officer (LNO) during brigade MDMP
- Brigade LNO during MI battalion MDMP

When Deployed (Exercise or Real-World Contingency Operation)

Develops the brigade-level enemy disposition—

- Maintain and update threat locations during the brigade's close and deep fights
- Submit reports to higher headquarters
- Assist in the brigade targeting process
- Conduct predictive analysis based on the tactical situation

Actively participates in brigade MDMP—

- Plan and wargame placement of MI assets
- Direct Support MI company commander uses the ACT to support asset management

Produces and disseminates intelligence products with All-Source Analysis System (ASAS) Remote Workstation (RWS)—

- Produce TACREPs (tactical reports) and transmit to the ACE
- Produce graphic INTSUMs (intelligence summaries) and RSRs (resource status reports) (also known as Blue-20s)
- Identify information that relates to the CCIR (commander's critical intelligence requirements)

Plans and trains for collection operations—

- Publish orders and instructions
- Anticipate events and activities, taking appropriate action (e.g., asset movement and trigger points)
- Serve as the requirements manager (assists in placement of assets)
- Maintain the status of critical classes of supply

Figure 3. The Roles of the ACT in Garrison and When Deployed.

Photo courtesy of the 103d MI Battalion.

Photograph taken during the Gunnery exercise.

commander's focal point for intelligence. He assists the brigade commander in identifying intelligence requirements that support the brigade mission. He also provides information to the commander for tactical decisionmaking by fully employing brigade IEW assets as part of the Intelligence BOS. Through the ACT, the S2 provides multidiscipline intelligence support to the brigade commander. The ACE further defined the ACT roles as shown in Figure 3.

The ACT Chief's Role

The ACT chief must focus on intelligence products for the supported brigade. Our experience reinforces observations noted by the 104th MI Battalion during their March 1997 deployment to NTC to participate in the Army's Task Force XXI (TF XXI) Advanced Warfighting Experiment (AWE). The ACT chief, in garrison, can effectively juggle many functions traditionally accomplished by the executive officer (XO). During the field operations, however, it is impossible for ACT chiefs to accomplish their responsibilities and attend maintenance meetings during field operations. The ACT chief must know enemy and friendly doctrine and systems and must ensure that all ACT personnel are fully knowledgeable in these as well. A better use of resources is to shift traditional XO functions to the operations platoon leader. This both frees the ACT chief to focus on the mission and develops the potential of the operations platoon leader. The ACT chief, armed with both institutional knowledge and experience, brings the team to life and gives the brigade S2 the analytical depth the organization needs.

ACT Training

In late November 1999, the 103d MI Battalion ACE developed a comprehensive training plan for the ACTs. The result was an eight-step training model[5] that established tasks, conditions, and standards for ACT training. The training strategy outlined responsibilities for critical leaders and supporting trainers (see Figure 4 below). It identified the essential need for close coordination between the MI company commanders and the ACE chief, and between the ACT chief and the All-Source chief. Our MI company commanders, in concert with the ACE chief, coordinated all training times, and provided measurable standards for the overall training. The ACT and All-Source chiefs, in turn, focused on the planning and execution of training, development of crew drills, and the necessary certification to validate months of individual training.

On 30 November 1999, the ACE held the first class of a three-month-long ACT train-up. Classes focused on everything from map reading to building a modified combined obstacles overlay (MCOO), and from developing a situational template to building a campaign plan. Each

Figure 4. ACT Training Strategy.

class focused on a different aspect of the intelligence preparation of the battlefield (IPB) process, and each class built on the previous training. The first half of the training consisted of basic analytical skills, while the second half focused on the automated systems used to process, analyze, fuse, and disseminate intelligence.

As part of the training strategy, the ACE developed an ACT "Gunnery"[6] as a means of measuring the level of training and certifying that an ACT is fully capable of accomplishing its wartime mission. On 18 January 2000, C Company, the 103d MI Battalion ACT, became the inaugural team involved in the prototype training and certification created by the ACE.

The ACE established an NTC-driven, Krasnovian-based scenario to facilitate the training. As part of the training process, the ACT received a division-level mission analysis from the ACE and supporting products to include a campaign plan, intelligence estimate, and appropriate INTSUMs up to the actual start of the exercise.

Upon receipt of all the products, the ACT's task was to tailor the initial enemy information to fit its particular echelon and to produce and brief comparable products suitable for a brigade commander and S2. Throughout the course of the MDMP, the ACT received additional information replicating a variety of disciplines and collectors.

The two-day exercise commenced with a backbrief by the ACT to the evaluators. The evaluators assessed the ACT on substance, accuracy, and TTP. The exercise continued in two phases: the enemy deliberate attack and the enemy defense. During the exercise, the evaluators judged the ACT on situational development, identifying indicators of enemy COAs, analysis, and fusion of multidiscipline intelligence.

Between the enemy deliberate attack and defense, the ACT had minimal time to produce a new mission analysis and backbrief the notional commander and S2 during the change of mission. The ACT had only three hours to produce and disseminate the entire product to the requiring consumer.

Throughout the course of the exercise, the evaluators significantly reduced the speed of the wargame in an effort to reinforce certain learning points such as the proper identification of a forward security element (FSE) or a combined arms reserve (CAR). The informal atmosphere established a "user-friendlier" environment for the ACT, which was conducive to the entire learning process.

During the course of the exercise, soldiers who were once clueless about their particular roles in the ACT began to flourish. For example, before commencement of the ACT Gunnery, the ACT had no truly established battle rhythm. However, by the exercise conclusion, the ACT managed to establish a battle rhythm that included both internal and external reporting and product requirements.

The ACT of the Future

The ACTs, like the Army in general, must face several diverse challenges in the future. From high-intensity conflict to stability operations and support operations, ACTs must be ready to support the brigades. In Bosnia, for example, the dynamic and unpredictable missions such as those of the Stability Force (SFOR) require an ACT to rely on a strong foundation of leadership, doctrine, tactics, and analytical fundamentals in order to persevere. The ACT and the S2 must be aware of the possibility of new state of the art equipment that may significantly enhance an operation. The **ACT enclave**, the latest in tactical intelligence technology, will provide the brigade with an Intel XXI capability.[7]

Staffed by four intelligence analysts (96B) and one signals intelligence (SIGINT) analyst (98C), the ACT enclave is and will be the ACT fusion center. The enclave system comes equipped with two All-Source Analysis System (ASAS) Remote Workstation (RWS) computers. The RWS provides a digital palette through which an analyst can visualize information collected from all of the sensors on a single screen and then share it with the brigade and battalion S2s as well as the Division Analysis and Control Element–Forward (ACE FWD). The ACT enclave also houses the MESHnet[8] Crew Intercom System, which allows analysts to monitor the brigade's radio nets and telephones while maintaining communications with each other. The Appliqué software, a command and control (C^2) initiative that provides message processing and friendly situational awareness, is an invaluable means to deconflict possible targets during collection.

Conclusion

Anecdotal evidence has shown that the status of the ACTs in the 103d Military Intelligence Battalion is the norm and not the exception across the Army. The lack of emphasis by the intelligence community on the impact of the ACT has led brigade S2s to relegate this force multiplier to the role of MI IEW asset tracking. Through proper training of the ACT, in conjunction with brigade S2s, the MI battalion has greatly improved the analytical capability of the S2 shop. Although the notional S2 in the vignette did not expect it, the receipt of a nearly complete product from "their" ACTs should not surprise brigade S2s. Proper training is the answer. ●

Editor's Note: By doctrine, the analysis and control team is not a mini-ACE although it does perform some of the same functions. Subordinate to the MI company commander and not under operational control of the S2, the ACT would not normally work on COA development, collection management, garrison classified briefings, etc. The base TOE (table of organization and equipment) ACT has one lieutenant and five 96B analysts. See Michael Taylor's article, "Emerging Doctrine on Brigade Intelligence Operations," in this issue of MIPB for additional information.

Endnotes

1. After action results during NTC and Joint Readiness Training Center (JRTC) rotations in 1998; NTC Trends and TTP, 1st and 2nd Quarters, fiscal year 1998 (FY98); and JRTC Trends, 2nd and 3rd Quarters, FY98, found at http://call.army.mil/call/ctc_bull/98-14/intel.htm.

2. Used both **FM 34-25-3, All-Source Analysis System and the Analysis and Control Element**, dated 3 October 1995, and **FM 71-3, Armored and Mechanized Infantry Brigade**, dated 8 January 1996, during research for this paper. They are at http://huachuca-usaic.army.mil.

3. The Intelligence XXI study conducted in June 1999 arose from a continuing need within the Army to adapt and prepare for the most likely future. In 1999, the Chief of Staff of the Army Deputy Chief of Staff for Intelligence (DCSINT) created a special task force to research and interview senior warfighters and intelligence leaders. The study compiled the results and published its recommendations in June 1999. Found at http://www.tsmasas.army.mil.

4. Units in the 3d ID (M) will use the Marne Eight-Step Model for planning and executing training:

- Plan the training.
- Train and validate leaders.
- Validate the training site (includes all support and resources).
- Issue the plan.
- Rehearse.
- Execute.
- Conduct AAR.
- Retrain.

5. The evolution of the 103d Military Intelligence Battalion training strategy was a result of a need for clearly defined ACT responsibilities coupled with information found in **ARTP -34-113-11, Military Intelligence Combat Assessment Tables**, **FM 34-3, (Draft) Intelligence Analysis**, January 2000, and **FM 34-130, (Draft) Intelligence Preparation of the Battlefield**, December 1999. Found at http://huachuca-usaic.army.mil/.

6. The "MI Gunnery" is a term adopted from the combat arms field. Gunnery is designed to attain and sustain platoon crews' tactical gunnery proficiency. The tasks, conditions, and standards on gunnery tables are based on a thorough analysis of gunnery engagement factors and reflect the actual hit or kill probabilities of U.S. tanks versus enemy tanks or antitank weapons. We adopted this method of training in an effort to maintain ACT analytical proficiency.

7. The Project Management Office for Intelligence Fusion introduced the ACT enclave in a presentation in May 1998. The Assistant Secretary for Army Acquisition, Logistics, and Technology, who is the senior research and development official for the Department of the Army, described the concept in greater detail on the homepage at http://www.tsmasas.army.mil/Tips/TWS&TIPS&ACT/ and http://www.sarda.army.mil/sard-zs/ar_zs_public_docs/weapon_handbook/.

8. MESHnet is an advanced voice and data, C^2 information distribution system designed for the digital battlefield. Originally fielded with the U.S. Air Force and adopted by the Army for several Force XXI command, control, and communications nodes.

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Analysis and Control Teams... A True Analytical Resource

by Lieutenant Colonel Stephen P. Perkins

Early in 1999, I noticed that there was a significant disconnect on how we used our Analysis and Control Teams (ACTs). This occurred due to lack of involvement by our Analysis and Control Element (ACE) in the planning and training of ACTs, and the lack of supervision and direction that I was providing. In an effort to change this, I developed a White Paper designed to provide that direction using the DTLOMS (doctrine, training, leaders, organizations, materiel, and soldiers) format. It would, in fact, be the driving force behind the ACT Gunnery training and a renewed emphasis on analysis within the Division. The White Paper provided the basis for this article.

The intent for Analysis and Control Teams (ACTs) is simple and focused. It is to improve measurably the analytical capability of the maneuver brigade. To do this, we must demand that commanders use benchmarks, metrics, and stretch goals to improve ACT training and readiness significantly.

Enhancing ACT Training and Readiness

We will achieve these measurable improvements by focusing on five imperatives that constitute the foundation of this strategy:

- Total integration of the ACT with brigade S2s and the ACE—One Team, One Fight, One Common Picture!
- Implement a gate strategy, including ACT lane training,[1] which ensures the ACTs have the requisite training.
- Establish an event-driven training and readiness strategy.
- Execute a battle-focused training program that strictly adheres to the Army eight-step training model and reinforces leader development. [CW2 Victor Diaz explains the eight-step model in endnote 4 on page 26.]
- Emphasize multi-echelon training and certification.

The end-state will be a fully integrated analytical team. The ACT needs adequate resourcing to be fully trained and ready to fight anywhere at any time. This training will infuse ACT soldiers with an attitude that recognizes we are a team of teams, committed to achieving a timely, relevant common picture of the enemy.

Fellow leaders, I hope you will follow the intent of this guidance as you develop your annual and quarterly training guidance and training plans. It is important to note that there is no new training doctrine in this article; all of our tried and proven training doctrine remains unchanged. We are only amplifying and rededicating our efforts to improve our readiness. Regardless, you can count on one thing as you read this paper—I am completely devoted to our ACTs making a difference. We owe it to the divisions we support!

The ACT Concept

First and foremost, the aim of this training strategy is at the company commanders who organize, plan, and direct training. The ACT concept provides the brigade S2 with an increased capability that he must leverage to meet the challenges of the future. The Army has made a significant investment in this concept. From past days where the intelligence electronic warfare (IEW) support element (IEWSE) was available to the brigade S2, we have invested our future in the ACT. Although both concepts have their merits, the ACT concept provides a more directed analytical capability. Additionally, the ACTs have a direct tie to their elder brothers, the ACEs. This strategy built upon tried and proven training methods with units conducting well-prepared training events with rigor, realism, and repetition.

Doctrine

Our doctrine, **FM 34-10 (Division IEW Operations)**,[2] tells us that the Direct Support (DS) MI Company provides the brigade with a significantly expanded intelligence capability. Currently, most of that expansion is through its connectivity with the ACE. Especially significant is the DS company's ability to coordinate the transfer of intelligence from the division ACE and package it best for the brigade S2. Additionally, the ACT is responsible for deconflicting terrain for all DS and general support (GS) MI company assets in the brigade's area of operations (AO).

Of note is the future addition of the Common Ground Station (CGS) and the Tactical Unmanned Aerial Vehicle (TUAV) into the DS company organization. These systems

and their capabilities will significantly expand the importance of the ACT.

Training

Training is crucial to the ACT concept. Company commanders are responsible for the training of their ACTs with the assistance of the ASAS (All-Source Analysis System) Master Analyst and the designated subject matter experts (SMEs) within the companies. The DS MI company commander is responsible for individual and collective training while the brigade S2 provides the battle focus and performance standards. Together, the S2 and the DS MI company commander establish measurable standards, provide training time, and allocate resources for ACT training. The ACT requires regular and challenging proficiency training. The ACT chiefs are the focal point for planning and executing this training. They and their subordinate noncommissioned officers (NCOs) ensure that ACT soldiers receive training and cross training on the ASAS systems and that the ACT soldiers train to standard as a team on battle-focused objectives.

Execute Real-World Operations. ACTs should participate in daily operations and contingency planning. The ACT in conjunction with the ACE can produce a weekly Red Book (Secret collateral) for its brigade. The Red Book addresses the brigade's anticipated deployment and training contingency areas. Additionally, the ACT can produce the pre-DRB1 (first division-ready brigade) assumption brief for the brigade staff and subordinate commanders.

Accomplish Integration of Intelligence. The ACT chief and NCO in charge (NCOIC) can designate members as area SMEs. They can coordinate with appropriate ACE SMEs (e.g., Kuwait, Egypt, and North Korea) and with IMINT (imagery intelligence), SIGINT (signals intelligence), and CI/HUMINT (counterintelligence and human intelligence) specialists to increase their capabilities. By participating in staff wargaming, non-MI unit-training events, and asking questions, the ACT can acquire an appreciation of the intelligence consumers.

Understand the Battlefield. ACT soldiers must understand how the friendly combat, combat support (CS), and combat service support (CSS) forces fight on the battlefield. Their knowledge should include an understanding of the tactics and equipment of their command, the capabilities and targeting requirements of friendly weapon systems, and the commander's expectations of the intelligence system.

Apply Standards. ACT soldiers must receive periodic training to ensure they meet all Army and unit standards for individual proficiency. They must be familiar with unit, brigade, and ACE standing operating procedures (SOPs).

Maintain Proficiency. Collective training should strive for the full integration of ACT leaders and soldiers into a combat-ready intelligence team. Crew drills teach soldiers how to employ the entire system in accordance with established doctrine; tactics, techniques, procedures (TTP); and unit-specific SOPs. The crew drills should be a part of all train-ups for major exercises and training at the combat training centers (CTCs).

Learn Through Simulations, Interactive Training, and Incorporation of the Tactical Simulation (TACSIM) System. The ACT should deploy in support of all division and brigade exercises because ACT soldiers learn the most when they work with the ACE. When possible, the ACT should continue its organizational development using off-site instruction.

The ACT must be capable of conducting collection management functions, developing real-world databases, and tracking intelligence assets. Company commanders will evaluate all the capabilities of their ACTs quarterly. Using a lane training exercise, companies will certify their ACTs.

Leader Development

The development of leaders in the ACTs will always be important. We should standardize this development so the ACTs will have a common baseline of expertise and knowledge. ACT leaders must be trained on the multitude of U.S. intelligence assets from organic (ground surveillance radars, CI/HUMINT teams) to theater (Rivet Joint and Guardrail) and national (U-2R). Furthermore, ACT leaders must be knowledgeable on opposing force or adversary organization, equipment, and operations. Based on anticipated uses of the ACT, leaders should be familiar with wargaming techniques and the deliberate military decisionmaking process (MDMP).

Organization

Improving support at the divisional maneuver brigade, the ACT expands the mission, functions, and resources formerly found in the IEWSE and the DS MI company. The ACT is organic to the DS MI company and collocates with the maneuver brigade tactical operations center (TOC). Unlike the ACE and the division G2, the ACT is not under the operational control (OPCON) of the brigade S2.

The ACT conducts 24-hour operations. The six-soldier section is led by an ACT chief (O-2) and assisted by an ACT NCOIC (E-6). The ACT has one senior analyst (E-5) and one junior analyst per shift. The ACT chief supervises the ACT and employment of baselines within the DS MI company's area of opera-

tions (AO). Additionally, the ACT chief plans and wargames placement of MI assets, and provides IEW expertise and advice to the brigade commander and S3. When fielded, the CGS will provide the Joint STARS (Joint Surveillance Target Attack Radar System) feed and broadcast intelligence from national systems, using the Joint Tactical Terminal. The JTT can operate in these intelligence dissemination networks:

- Tactical Reconnaissance Intelligence Exchange System Network (TRIXS).
- Tactical Information Broadcast System (TIBS).
- Tactical Related Applications Program (TRAP).
- Tactical Data Information Exchange System–Broadcast (TADIXS-B).

Under the direction of the DS MI company commander, the ACT provides the brigade S2 with automated intelligence processing, analysis, and dissemination capabilities. Additionally, the DS MI company commander uses the ACT to support asset management and reporting of subordinate CI, HUMINT, and IMINT teams. The ACT uses ASAS workstations to access databases, reports, graphics, and other products at higher echelon organizations, primarily the division's ACE. When augmented with the TROJAN SPIRIT (Special Purpose Integrated Remote Intelligence Terminal), the ACT can conduct split-based operations, "pulling" support from an intelligence support base outside its AO.

Materiel

The materiel assigned to the ACT consists of one M577A3 carrier and the Warlord Notebook (WLNB) computer, the ASAS Remote Workstation (RWS), or both. The carrier allows the ACT to keep up with its sister units in the brigade TOC. The WLNB allows the ACT to access the ACE products "pushed" to them while the RWS will allow the ACT to access the electronic database that the ACE provided. The ACT can manipulate the database and provide updates to the ACE.

During training with the brigades, the ACTs draw normal assistance from their supported brigade. For IEW-specific systems, the ACTs rely upon the MI battalion for support. The ACT's first stop should be its company trains. The company will evacuate the inoperable equipment as needed.

ACTs should try different methods and techniques to increase their abilities to meet the brigade S2's needs. This may take the form of add-ons to automation or the adaptation of changing technologies to enhance their performance or support to the customers. To do this, ACTs must work with the ACE and its leaders to ensure that they have as much, if not more, capability than is available to the brigade S2 section. Much of this work will center on the ACT's ability to fuse intelligence, allow for better situational awareness, and collaborate with its sister ACTs and the ACE. The DS MI company commander and ACT chief must understand the brigade's needs and have the tools to meet the needs.

Soldier System

There are very few priorities more important to the division than the synchronization of the intelligence picture. Crucial to that synchronization is the effort to see and analyze the enemy. Personnel resources in the ACTs play an important part in obtaining the "common picture." When possible, the ACTs should be at a minimum of 75-percent strength. There will always be either an officer or NCO available for the development of the ACT. To accomplish, we must have a firm handle on where our analysts (96Bs) are, both in their development and levels of expertise. At times, a junior soldier will be the better pick for an ACT, because of area expertise or knowledge of a specific system, such as ASAS. An experienced ACE analyst may be the perfect soldier to take over the reins of an ACT. Logically, the best ACT chief is one that understands the battalion's assets and TTP. Similarly, an experienced ACT soldier could transition to the ACE as a junior leader within one of the sections of the ACE.

Critical to the overall soldier system is the retention of qualified solders and leaders. Free movement with the Intelligence battlefield operating system allows our soldiers and leaders to develop, use different skills, and understand the entire system. The ACE and ACTs must ensure the opportunity for their soldiers to attend schooling and to enhance their opportunities to progress in their fields. We should never keep a soldier from a leadership development school unless we are "going" to war. We must, however, accept the risk for other exercises.

Finally, we need to exercise "TIPS"[3] in all that we do. Take the time to talk with your soldiers, keep them informed of the situation, and make their lives as predictable as possible. In addition, be sensitive to their needs. Our soldiers are the true heart of the ACT organization.

Closing Comments

The well-trained ACT can be a tremendous combat multiplier for a maneuver brigade S2. There is no "school solution" to using the ACT. Each brigade "team" must understand its particular strengths, weaknesses, and needs. During the course of planning and training, the ACT can help with all of the intelligence tasks that the brigade must perform.

(continued on page 35)

Multinational Brigade–East ACT Operations in Kosovo: 18th Airborne/Air-Assault (Poland) ACT

by First Lieutenant
Mike E. Crane

The Analysis and Control Team (ACT) from B Company, 101st Military Intelligence Battalion, 1st Infantry Division (1ID), in Wuerzburg, Germany, was the first of its kind to deploy to Kosovo in support of Operation JOINT GUARDIAN on 16 June 1999. According to doctrine, the ACT is designed to deploy with a brigade, providing the necessary intelligence connectivity to division-level assets. In Kosovo, a subordinate battalion would require its own ACT in order to provide the critical intelligence link to the Multinational Brigade–East (MNB-E) Headquarters. Particular emphasis focused on the three non-U.S. battalions forming MNB-E: 18th Airborne/Air Assault Battalion (Poland), 13th Tactical Group (Russia), and 501st Mechanized Infantry Battalion (Greece). The MNB-E relied on a U.S. higher headquarters and Division ACE (Analysis and Control Element). It became crucial that these foreign battalions maintain an onsite U.S. intelligence team to assist in such tasks as reporting procedures, database management, collection plan development, and IEW (intelligence and electronic warfare) asset coordination.

Deployment of the ACT and Other Support

The ACT from B Company, 101st MI Battalion, rolled across the border of Macedonia into Kosovo with 1ID's 2d Brigade in late June 1999 as part of the IEF (initial entry force). They joined a small U.S. force that had deployed only two weeks earlier as part of the Division's advance party. The 1st ID ACE personnel were among the first arrivals at the camp, and had already formed the basis for the intelligence framework in Kosovo. The ACT's first week in

Kosovo mostly comprised a familiarization with the land and demographics, as well as what little information on personalities and organizations had been gathered thus far in the sector. The immediate mission for the ACT was to set up operations at a new base camp in Gnjilane established by the 1st Battalion, 26th Infantry Regiment. Our ACT was not to deploy to the Polish Battalion until the follow-on ACTs arrived in theater.

In early July, the ACT deployed to its permanent position with the headquarters of the 18th Airborne/Air-Assault Battalion from Poland occupying the southwestern portion of the U.S. sector of Kosovo. The 18th is the first unit from Poland to deploy in support of the North Atlantic Treaty Organization (NATO).

Establishing Connectivity

Connectivity was an initial problem at the new base camp. It was quickly overcome with a workaround procedure that enabled the RWS (All-Source Analysis System (ASAS) Remote Workstation) to view certain documents produced by the ACE and available on the SIPRNET (Secure Internet Protocol Router Network). However, these products included only those created on Microsoft® Word or PowerPoint™, and there still was no transmission capability for submission of the Polish Battalion's daily intelligence reports. Couriers remained necessary on a daily basis to and from Camp Bondsteel, MNB-E, 20 kilometers to our northeast, in order to fully develop the overall intelligence picture. In late August, a fully capable desktop computer arrived allowing the ACT complete access to the SIPRNET and all products generated by the various intelligence agencies in the Kosovo Theater.

In addition to the ACT, a U.S. detachment from the 121st Signal Battalion and an LCE (Liaison and Coordination Element) from 10th Special Forces Group deployed to the Polish base camp. The signal detachment's primary functions consisted of providing the 18th POLBAT (Polish Battalion) with MSE (Mobile Subscriber Equipment) lines and other communications support, while the LCE accomplished all necessary liaison operational coordination between the POLBAT and Task Force (TF) Falcon. The support of the LCE was incredibly beneficial and essential to the ACT, yet the principal function of these U.S. detachments was to support the Polish Battalion fully, better linking them to their U.S. higher headquarters at TF Falcon.

Integrating Differing Doctrine and Methods

The initial challenges for the ACT at the POLBAT involved incorporating the Polish doctrine of intelligence gathering and dissemination with that of TF Falcon. The POLBAT's patrol debriefing formats were remarkably similar to those in 1ID's guidelines, requiring few adjustments. On the other hand, though familiar with U.S. Army manuals such as **FM 34-130, Intelligence Preparation of the Battlefield**, the POLBAT S2 and his staff

Photographs courtesy of LTC John S. Rovegno.

Flags at the entrance of the Polish Headquarters.

did not fully understand the intricacies of the various intelligence products required of them. For example, as TF Falcon developed new collection plans, the collection management section would request subordinate battalions to develop and update the collection plans for their respective areas and submit them to the higher echelons. Tasks such as these required the ACT to work closely with the POLBAT intelligence staff on developing NAIs (named areas of interests), SORs (Specific Orders and Requests), and detailed collection taskings to subordinate companies. Rather than pushing U.S. doctrine on the POLBAT, procedures and techniques extracted from both countries' methods helped develop a product that best suited the POLBAT S2 staff, while fulfilling the requirements of the TF Falcon G2.

Serving as a POLBAT Intelligence Liaison

With the exception of connectivity to TF Falcon headquarters for submission and retrieval of intelligence reports, the imagery provided to the 18th POLBAT was the most useful function of the ACT in assisting the POLBAT during their mission planning. Several routes and terrain features not accessible to the POLBAT's dismounted patrols became available for their analysis through RFIs (Requests for Information) the ACT submitted to the collection management section. These missions ranged from monitoring border crossings to identifying possible weapons caches and illegal detention centers. Technology that the POLBAT had not anticipated having available was suddenly at their disposal through the ACT during their mission analysis and significantly enhanced their force protection.

Interaction with various other units operating in the 18th POLBAT sector quickly became an important function of the ACT Chief in organizing and filling intelligence gaps. Military police (MP), field HUMINT teams, and civil affairs elements were among the most useful sources of additional information in the POLBAT sector. The results of MP investigations occurring in the POLBAT sector often provided excellent follow-ups to initial spot reports. Before conducting a mission in the POLBAT sector, the field HUMINT team would stop by the POLBAT headquarters to inform them of their intentions. As a result, the ACT and Special Forces LCE were able to incorporate several of the POLBAT Commander's PIR (priority intelligence requirements) into the field HUMINT team's collection plan. This method proved invaluable in gathering information on recent trends in the local populace's attitude toward the POLBAT and predicting possible future actions against the Kosovo Force (KFOR). Finally, the civil affairs teams provided useful information on local leaders, organizations, and emerging businesses throughout the POLBAT sector. This data greatly improved the accuracy of the local leadership structures developed by the ACE and ACTs. Constant interaction between the ACT Chief and these various units ensured that no information relevant to the planning of 18th POLBAT missions went unnoticed. The liaison effort (not a traditional ACT role) also allowed the POLBAT Commander and his staff to input their intelligence needs into the plans of these various collection agencies.

Connectivity is the heart and soul of the ACT, and without it, the ACT cannot perform any of its functions

In working with another nation's military, it is imperative not to push U.S. doctrine as the "only way of doing things." There were many valuable exchanges of intelligence analysis techniques shared between the POLBAT intelligence staff and the ACT. We passed several procedures, especially those of the POLBAT patrol system, to TF Falcon to improve upon our own methods. Similarly, the POLBAT staff was extremely responsive to any suggestions offered by the ACT in

Two Polish APCs belonging to the 18th POLBAT.

enhancing their intelligence collection and management. By the time the B Company ACT redeployed to Germany in early December, the POLBAT S2 and his staff were very confident in their relationships with the TF Falcon G2 and ACE and comfortable with their understanding of the products developed by their higher headquarters.

ACT Preparations for Peacekeeping

In preparing an ACT for a peacekeeping mission such as that in Kosovo, the emphasis must be on connectivity. A thorough review of the operating systems used by the ACE, adjacent ACTs, and various other intelligence agencies is essential. The best method of ensuring such compatibility is the complete architecture of the networks that will be in operation. It is through this method that the ACT chief realizes the specific requirements of the system, from bandwidth to LAN (local area network) cable type and length to software programs.

Related to this evaluation of the architecture is the identification of the expected types of intelligence products and their formats. Everyone is aware of the standard SALUTE (size, activity, location, unit, time, and equipment) report format and basic intelligence summary (INTSUM) guidance. Beyond these standard reports, units must identify other product formats as well. What do reports such as the Hunter UAV (unmanned aerial vehicle) Feeder Report, MP Blotter Report, or SIGINT (signals intelligence) Summary look like and where is the information pertinent to the subordinate battalions found in these reports? Most importantly, what software requirements are necessary to view these products on the SIPRNET? Connectivity is the heart and soul of the ACT, and without it, the ACT cannot perform any of its functions.

Another important step in preparation for deployment is for the ACT to become familiar with the various other intelligence agencies that will be operating in theater, as well as those that offer support from echelons above division level. ACT personnel must become adept in filtering through these reports for data relevant to their supported units. Similarly, the ACT also needs to know where to look for intelligence required by the supported commander, providing it in the most timely manner possible. The SIPRNET connection provides hundreds of links, with more constantly added. A basic understanding of who collects on what targets and where they collect can save the ACT time and prevent duplicated work.

Final Thoughts

The opportunity to work with an elite unit as professional and skilled as the Polish 18th Airborne/Air-Assault Battalion was a unique experience. In turn, the POLBAT was extremely grateful and excited to work with several U.S. detachments as part of MNB-E. Considering the massive quantity of intelligence products developed by U.S. units and other agencies in the first six months of NATO's Kosovo mission, it is difficult to imagine a foreign military unit operating successfully in a coalition without the aid of an ACT to filter the relevant information. As NATO performs an increasing number of missions using multinational units, differing doctrines and procedures among the various armies may begin to meld eventually into one SOP (standing operating procedure). Until then, however, detachments such as the ACT are required to provide the critical connectivity and liaison support to ensure the success of multinational endeavors. ●

My thanks to Major Thomas "Mick" Cowan, former Executive Officer of the 101st MI Battalion, for his review and suggestions in the preparation of this article.

First Lieutenant Mike Crane is currently the Operations Platoon Leader of B Company, 101st Military Intelligence Battalion, 1ID, in Wuerzburg, Germany. He previously served as S2, 1st Battalion, 6th Field Artillery Regiment. 1LT Crane has a Bachelor of Science degree from the U.S. Military Academy where he majored in Literature and Philosophy and minored in Systems Engineering. Readers can contact him via E-mail at michael.crane@hq.1id.army.mil and telephonically at DSN 350-7309.

Emerging Doctrine on Brigade Intelligence Operations

by Sergeant First Class Michael C. Taylor (USA, Retired)

The Intelligence Center's Doctrine Division recently completed and posted to its website (http://huachuca-usaic.army.mil/doctrine/dlb.htm) the final drafts of **FM 34-80-1/ST** and **FM 34-10-5/ST** on brigade and division intelligence operations, respectively. The following information from these manuals illustrates lessons learned and the direction of emerging doctrine on brigade intelligence operations.

It is important to note that the analysis and control section described below is an integral part of the MI company command post and is not under the operational control of the S2. This reflects the support relationships defined in the original concept and approved doctrine, the distinctions between command and support relationships, and the principles of command and control (C^2). Like other intelligence staffs, the maneuver brigade intelligence staff is responsible for answering brigade commanders' intelligence requirements with or without the assistance of the MI company. Additionally, like all commanders, the MI company commander is accountable for the success or failure of all the elements under his command.

Brigade Intelligence Staff

The brigade's intelligence staff, like those at each echelon, is responsible for producing intelligence that depicts the current threat situation and helps to predict future threat objectives, capabilities, and courses of action (COAs). The S2 is the brigade's senior intelligence staff officer for all matters concerning intelligence, surveillance, and reconnaissance (ISR) operations and intelligence training. The S2 is responsible for ensuring the brigade's complex ISR operations satisfy the CCIRs (commander's critical information requirements), specifically the brigade commander's PIR (priority intelligence requirements), and those of his subordinate commanders. Supported by operations and plans teams, the S2 helps the commander coordinate and supervise the execution of ISR plans and operations.

S2 Operations Team. The brigade S2 operations team is responsible for threat situational development and presentation in support of the brigade's current operation. The team focuses on the threat activity and environment within the brigade's areas of operations (AOs) and interest (AOIs) that affect the current operation. The operations team uses automated tools to integrate information and intelligence products from subordinate battalion S2s and supporting ISR organizations continuously to update the threat situation. This situational assessment forms the threat portion of the brigade common operational picture. The S2 operations team assists the S2 in tracking threat COAs and alerting the commander to changes to forecast threat COAs, capabilities, or intentions.

S2 Plans Team. The brigade S2 plans team has responsibility for threat COA development and wargaming. The S2 planner works with the brigade S3 planner and other staff elements to plan future operations. The team uses the IPB (intelligence preparation of the battlefield) products developed within the team and from higher headquarters to analyze the threat and environment within the brigade's AOI. The S2 plans team, as part of an integrated staff effort, refines and presents threat COAs during mission analysis, COA development, and wargaming.

MI Company

The commander of the MI company is responsible for multidiscipline intelligence operations in direct support (DS) of the maneuver brigade and its subordinate units. The MI company commander answers to the MI battalion commander for the discipline, combat readiness, and training of the company. He must be proficient in the C^2 of the company, employing organic and attached assets, and interpreting the ISR tasks of the battalion and supported commands. He coordinates continuously with the MI battalion staff, the supported maneuver brigade staff, and other commanders to ensure integrated reconnaissance and surveillance operations and intelligence support.

The operations center is the company commander's principal mechanism for—

- Controlling the unit's reconnaissance and surveillance operations.
- Providing technical support to collection.
- Answering ISR priorities of the supported command.

A part of the company command post, the operations center consists of the company headquarters, control teams for collection assets, and an analysis and control section (see Figure 1).

Control Teams. Control teams consist of senior analysts and collectors from the same platoon or intelligence discipline as the collection teams. They assist the company commander in tasking and providing technical support for two to four collection teams. The control teams are normally part of the company operations center. By exception, the company commander may position the control teams outside the operations center to meet SCIF (sensitive compartmented information facility) requirements or to ensure dissemination of tasking, reports, and technical data between the company and the deployed collection assets.

Analysis and Control Section. The analysis and control section assists the company commander in controlling operations and answering the ISR priorities of the supported unit. The section consists of an all-source analysis team, IMINT (imagery intelligence) analysis team, and an intelligence processing team. As part of the company operations center, the section works closely with the control teams to ensure integrated and responsive support to the supported brigade's command post.

A small **All-Source Analysis Team** receives, evaluates, and analyzes information collected by the company's collection teams. Combined with information pulled from the division analysis and control element (ACE), the team assists the company commander in answering the ISR priorities of the supported unit. Working closely with the brigade S2 operations and plans teams, the analysis team can rapidly recognize collection opportunities or a gap and recommend retasking of the MI company's assets to respond to a changing threat situation or brigade priorities. Collaboration with the supported unit's intelligence staff and the division's ACE is essential for maintaining threat situational awareness and providing substantive recommendations to the MI company commander on future R&S (reconnaissance and surveillance) operations.

The **IMINT Analysis Team** will analyze images obtained from photographic, infrared, laser, electro-optic, and radar sensors. The team exploits the raw imagery from collectors within the brigade such as the digital camera photographs taken by reconnaissance scouts and the video downlinked from unmanned aerial vehicles (UAVs). It maintains an imagery product library and accesses the imagery databases of the division ACE. The team correlates, enhances, and annotates these various images and IMINT products into situational, targeting, and planning products for the supported unit. The team is responsible for capturing UAV video, annotating the video product, and linking that information to the icons in the All-Source Analysis System (ASAS) threat situation graphic. The team's IMINT database and products support all-source analysis, target analysis, and imagery collection.

The **Intelligence Processing Team** operates the Common Ground Station (CGS) AN/TSQ-191(V)1 system. The team receives and processes radar data from the U.S. Air Force E-8C Joint Surveillance and Target Attack Radar System (Joint STARS) and U-2 aircraft. The team uses the data to detect, locate, classify, and track a variety of moving and fixed targets in areas not under the brigade's control. It uses the CGS to correlate and display near-real-time information from other collection assets with its radar data to refine its interpretation of the threat activity. The team works closely with the all-source analysis team, IMINT analysis team, and UAV control team to ensure timely support to situational development and targeting.

Comments

Readers should direct their comments on this extracted information as well as the manuals themselves

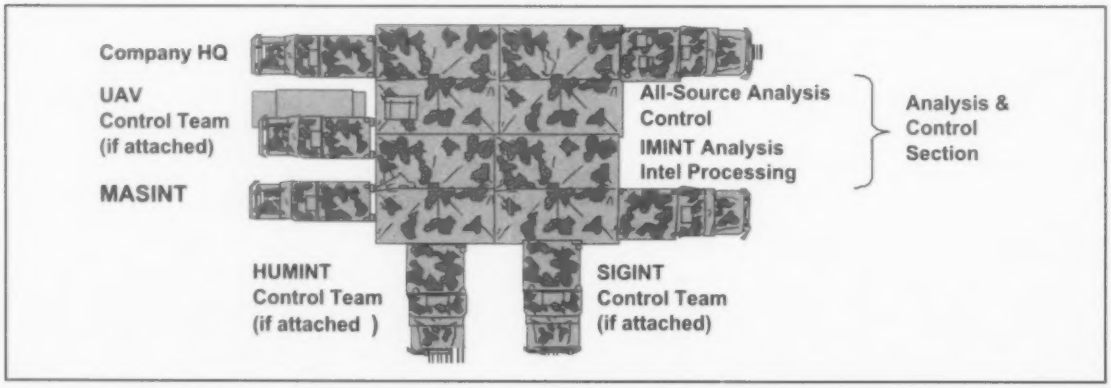


Figure 1. MI Company Operations Center.

to the points of contact listed on the website or the Chief of the Doctrine Division, Mr. Steve Leeder. You can reach Mr. Leeder via E-mail at leeders@huachuca-emh1.army.mil or telephonically at (520) 538-1002 or DSN 879-1002.

Mr. Taylor is currently the Project Leader for a contractor team developing intelligence doctrine on the digital brigade, division, and corps for the Doctrine Division of the U.S. Army Intelligence Center. His previous doctrinal literature products include ***FM 34-1, Intelligence and Electronic Warfare Operations; FM 34-25-3, All-Source Analysis System and the Analysis and Control Element****; and the writer's draft of* ***FM 34-80-2, Initial Brigade Combat Team Intelligence Operations****. Readers can reach him by telephone at (520) 538-1185 or DSN 879-1185 and via E-mail at taylormc@huachuca-emh1.army.mil.*

ACTs...A True Analytical Resource

(Continued from page 29)

We have the most talented soldiers and leaders in the history of our Army. Using the ACT appropriately, we can become "one team and one fight" in achieving the common picture. By using a multi-echelon training strategy, we can truly make a positive difference in the training of the ACT. I expect that commanders will bring their talents and energy to bear on the training of their ACTs and integrating them into the brigade teams. As Intelligence leaders, we must get our ACTs trained and ready to meet the challenges of the future.

Endnote

1. Lane training is a process for training company-size and smaller units on one or more collective tasks (and prerequisite soldier and leader individual and battle drills) supporting a unit's mission essential task list (METL). Lane training culminates in a lane training exercise (LTX) conducted under conditions replicating the unit's operational mission and environment. Although an LTX is usually a live training simulation of one or more collective tasks, it can be a constructive or virtual simulation. Like all training, the goals of lane training are to ensure soldiers, leaders, and units become tactically proficient and technically competent. An LTX usually is a mini-STX; it focuses on fewer collective tasks to enhance training effieciency. It has no free play. (**TC 25-10, A Leader's Guide to Lane Training**, 26 August 1996, pages 5 and 9.)

2. **FM 34-10** was a draft document. See the new **FM 34-10-5/ST** which provides the latest information.

3. The use of the term "TIPS" relates back to the philosophy of General Thomas A. Schwartz during his command of III Corps when he discussed four thoughts to remember in achieving "People first—mission always." TIPS stands for **talk** with others on the team, keep them **informed**, make their lives more **predictable**, and be **sensitive** and considerate of others.

I would like to acknowledge the input and feedback that Majors Steve Woolwine, my Battalion S3, and Ron Stephens, 3d Infantry Division ACE, provided. The ACE's MAJ Brenden McAloon greatly assisted in the implementation of this training program, and S3 oversight from MAJ Tony Crawford truly made a difference as we prepared for the All-Services Combat Identification Evaluation Test (ASCIET) 2000 and National Training Center (NTC) Rotations 00-03 and 00-07.

Lieutenant Colonel Steve Perkins is currently attending the Army War College (Class of 2001). He just finished serving as Commander, 103d MI Battalion. LTC Perkins' previous assignments included Combatting Terrorism Support Team Leader, J2/The Joint Staff, Defense Intelligence Agency; Brigade S3, 504th MI Brigade; Battalion Executive Officer (XO), 163d MI Battalion (Tactical Exploitation); Chief, G2 Operations, III Corps; S2, 2d Air Assault Brigade, 101st Airborne (Abn) Division and Chief, G2 Plans, 101st Abn Division; and Light Infantry Company Commander and Battalion S3, 14th Infantry, 25th Infantry Division (Light). He also served as an Assistant Professor of Military Science at Southeastern Louisiana University. Lieutenant Colonel Perkins holds a Bachelor of Science degree in Criminal Justice Technology from Cameron University and a Master of Public Administration from Auburn University. His military schooling includes the Joint and Combined Staff Officers School (AFSC), Air Command and Staff College, and the Army Command and General Staff College. Readers may contact LTC Perkins via E-mail at Stephen.Perkins@carlisle.army.mil.

The S2: Not Just an Intelligence Officer

by Captain Michael D. Brady

The purpose of this paper is to explain the critical tasks an S2 must understand to be a crucial member of a maneuver brigade or battalion staff. It grew from my experiences during numerous field training exercises and the Army's Task Force XXI Advanced Warfighting Experiment (AWE) at the National Training Center (NTC) in 1997.

Thinking Like an Operations Officer

The S2s of maneuver brigade or battalion staffs are critical officers to their units. Not only should they be the masters of their craft but also they must clearly understand battlefield communications and operations. In short, they must think and act as operations officers.

Intelligence preparation of the battlefield (IPB) defines what intelligence is all about. IPB is a continuous cycle that requires updating as situations on the battlefield develop. It drives the commanders' decisionmaking process and is the tool by which they identify critical battlefield effects and decide how they will accomplish their missions.

The S2 must understand the unit's information requirements and how that knowledge will affect the TF scheme of maneuver

I served as the battalion S2 for 1st Battalion, 22d Infantry Brigade. I spent as much time defining the battlefield and describing its effects as I did in understanding the maneuver plan and the Task Force's (TF) task, purpose, and method of execution. I had to think as an operations officer.

The S2's Collection Tasks

Collection is a critical process in supporting the maneuver commander. The S2 must collect information within the commander's battlespace. This includes weather and terrain data and information regarding the enemy. On today's digitized battlefield, this process can become overwhelming if an S2 does not know where to obtain that information.

The S2 must understand the unit's information requirements and how that knowledge will affect the TF scheme of maneuver. This is where thinking as an operations officer is critical for the S2. The effective S2 must determine the information needed by the TF commander to achieve the objectives. If not, the S2 will fail and, more importantly, soldiers will die on the battlefield.

The reconnaissance and surveillance (R&S) plan is critical during the collection process. The most important step for an S2 is to discuss the collection plan with the battalion S3 and TF commander. They ultimately decide where the intelligence collection focus will be, not the S2. While the S2 develops the R&S plan during the planning process, the S3 or commander must approve it before execution. This is the first step toward synchronizing intelligence with operations.

It is important for an S2 to clearly understand fire support tasks, engineer tasks, the logistics support plan, the communications plan, etc. This will ensure that priority of collection is at the right time and place on the battlefield. For example, if the TF commander wants to employ smoke during an important phase (e.g., before a deliberate breach), he must have eyes forward to observe the smoke and assess its battlespace effects. This is why the S2's collection plan must have an operations focus.

Logistics operations are sometimes the most challenging and important to the success of a maneuver TF

Facilitating Operations

Fire support tasks are critical to the TF commander's success. Effective fires directed against enemy forces will disrupt enemy plans and schemes of maneuver. The S2 must clearly understand these tasks and provide the fire support officer with the tailored information he needs to support the combat commander's scheme of fires.

Logistics operations are sometimes the most challenging and important to the success of a maneuver TF. The S2 must understand where refueling operations will occur, what routes resupply units will travel, and where the logistics team plans to locate drop-off sites (e.g., Class V). As the situation on the battlefield evolves, lone enemy vehicles that the advancing force had bypassed can decimate TF logistics operations.

Understanding how information passes is almost as critical as analyzing the information processed

Knowing the TF's scheme of maneuver is crucial since company teams have different tasks and purposes during the conduct of a fight. Information not critical to the TF commander may be critical to a company or team commander or a platoon leader. Additionally, what is important for one company team commander may not be as consequential to another. However, thorough understanding of the TF scheme of maneuver will make reporting less difficult. It will also prevent reporting of unnecessary information, therefore reducing the amount of information the company or team commanders and the platoon leaders must process during the fight.

Communications architectures are also critical to the S2. The successful S2 would know precisely how the systems work (for example, the All-Source Analysis System-Remote Workstation (ASAS-RWS), Enhanced Position Location Reporting System (EPLRS), Appliqué, etc.) and the "pipelines" over which dissemination of battlefield information flows. The S2 is a critical link in the achievement of **information dominance**.

Understanding how information passes is almost as important as analyzing the information processed. When links go down, the S2 must know why the unit is not receiving critical data to support TF operations. Knowledge of the communications configuration will also help identify the information that intelligence teams cannot collect and the resulting impact on TF operations. The S2 who understands breakdowns in information flow can focus the trained experts more quickly to solve the problems. These experts include the 31Us (Signal Support Systems Specialists), the battalion's communications officer, and civilian contractors.

Final Thoughts

Although life as an S2 can be difficult, it is a very important job. Intelligence operations are critical for the TF commander's accomplishment of the scheme of maneuver. A clear understanding of this maneuver plan and intelligence support to it will make the S2 a valuable and trusted officer in the unit. Ultimately, the S2's understanding of maneuver operations will determine whether the Task Force succeeds and saves or loses lives. ●

Captain Mike Brady assumed command of the Potomac Recruiting Company in December 1998 and will leave this August to serve in the White House at the Presidential Emergency Operations Center. He commanded Headquarters and Headquarters Support Company, 303d MI Battalion; served as the Assistant Brigade S3 for the 504th MI Brigade; was the Battalion S2 for the 1st Battalion, 22d Infantry Brigade; and Commander, B Company, 163d MI Battalion (Tactical Exploitation). CPT Brady graduated (Cum Laude) from the Citadel with a Bachelor of Arts degree in History. Readers can reach him via E-mail at mbrady7361@aol.com.

THE S2 WARRIOR?

by Captain David E. Norton

Can the maneuver battalion S2 answer the commander's critical information requirements (CCIR); if not, are we asking the right questions? Before we can address the question of whether the S2 can answer the CCIR, we need to identify what information is truly critical at the task force (TF) and company and team levels. Too often, we fall into the trap of "more is better" when we think of intelligence on the battlefield. We all want to know everything there is to know about the enemy, the terrain, the weather, and every other aspect of the fight. We reach such information overload that we have neither the time nor assets to translate the information into intelligence. As a former commander of a tank company, I always preferred some basic intelligence about my enemy to a tremendous dump of information that I could not possibly assimilate into useful battlefield intelligence.

Answering the CCIR

Perhaps my approach is too simple for the modern complex and asynchronous battlefield. As a company commander, I only looked for three basic things from the battalion S2:

- The enemy's most probable course of action (COA) and the most dangerous enemy COA. This allowed me to address the enemy's most probable COA while maintaining a plan to deal with the dangerous COA if it occured.
- When and where during the battle could I expect to make contact with the enemy based on the enemy's most probable COA? This includes each of the seven forms of enemy contact: visual, electronic warfare (EW), indirect fire, direct fire, obstacle, aerial, and chemical contact. Using this intelligence provided by the S2, I could adjust formations, movement techniques, fire control, and every other part of the operation accordingly.
- What is the enemy's center of gravity, that one enemy element from which he draws his power and freedom of maneuver? Knowing the center of gravity allows the commander to focus combat power on the enemy's critical vulnerability to effect the rapid destruction of the enemy's ability to conduct combat operations.

Most Probable and Dangerous COAs. The first step in answering the commander's questions is developing the enemy's most probable COA. This is not the first step in the intelligence process, but this is where intelligence preparation of the battlefield (IPB) turns out usable intelligence. There are many elements involved in deducing the enemy's most probable COA; these include but are not limited to—

- Enemy versus friendly capabilities.
- Effects of terrain and weather.
- Most importantly, the enemy's ultimate objective.

Armed with this information, the S2 can define an enemy COA that is realistic and would contribute significantly to the enemy's achieving his overall mission.

The first question the commander should ask the S2 when he briefs the enemy COAs is, *"if you were the enemy commander, would you fight it this way?"* Too often, the answer will be *"no,"* which leads to the question *"then why do you think the enemy will fight it this way?"* The only sure way to develop the most probable enemy COA is for a soldier who understands enemy doctrine as well as the enemy mission and tactics to put himself in the enemy commander's position. Thinking like the enemy commander, he develops the most effective COA based on the information available. This soldier could be an experienced S2, or in cases where the S2 does not possess a wealth of maneuver experience, the battalion executive officer, S3, or assistant S3 could assist in devising the enemy COA. The development of the enemy COA is far too important to risk using a substandard product simply because staff members do not want to cross the line between S2 and S3 responsibility as outlined in **FM 101-5, Staff Organization and Operations**, dated 1997.

With the most probable enemy COA determined, the staff should next address the most dangerous enemy COA; this COA is the one that could cause the worst problems for the friendly forces. We must take this COA in context with the most probable COA since the combat commander must know what the most harmful enemy action would be if we build our operational plan around our estimated most probable enemy COA. With these two COAs, the commander and S3 can plan an operation to defeat the most probable COA while building in "branches" or contingencies to address the most dangerous COA.

Initial Contact With the Enemy. Determining the most probable enemy COA translates quickly into a situational template of the enemy force that will provide the answers to the commander's second question. Templating the enemy allows

the S2, using products such as Terrabase, to determine range fans for enemy weapons and visual acquisition systems. This answers the commander's questions of—

- When can he initially expect the enemy to observe him?
- When will he receive direct fire contact?
- When will he receive indirect fire contact?

Once we determine the enemy's capabilities, and position range fans, we can determine the most probable locations of enemy obstacles. Based on the information outlined above, we can apply enemy doctrine and make a good assessment of where to expect enemy close air support or chemical weapons use.

Initially this intelligence provided by the S2 and the rest of the battalion or TF staff is the best guess about the battlefield situation based on the information on hand. Once the initial staff work is complete, the S2 with the commander, S3, and scout platoon leader must build a reconnaissance and surveillance (R&S) plan that confirms or denies the enemy COA. This should be a very directed effort targeted at gathering the information critical to confirming the enemy COA. The scout platoon is the primary intelligence asset at the battalion level, and it is imperative to focus their efforts. Based on reports from the scouts performing a directed R&S plan, the S2 can confirm the initial enemy assessment or use the information to make changes that provide the commander with a clearer picture of the battlefield.

Enemy Center of Gravity. Battalion S2s who can answer the commanders' first two critical intelligence requirements have provided the type of intelligence that leads to victory on the battlefield. The final critical element the S2 can provide to the commander is identification of the enemy center of gravity. This is the single element from which the enemy derives his freedom of maneuver and will to fight. Often this is elusive, and it is different for each unit and at each level of command. In trying to identify the enemy center of gravity, it is imperative that the S2 focus on the correct enemy echelon. Knowing that the center of gravity of the enemy nation is its industrial base is of little use to the TF or company commander who is facing an enemy brigade, battalion, or company.

Commanders must provide the focus by asking the right questions; they cannot simply expect their S2s to know what they want

The effective S2 is able to ascertain both the enemy center of gravity and the critical vulnerability we can exploit to attack that center of gravity. This critical vulnerability could be, for example—

- The way the enemy deployed his forces.
- An inability to defend against close air support if we destroy his antiaircraft guns.
- Lack of ability to mass the effects of his fires while breaching an obstacle.

This will enable the S2's commander to best focus his combat power and quickly achieve lasting success.

An Achievable Task?

Can battalion S2s provide the types of information listed above? Do they have the data at their disposal and the assets to transform that information into tactical intelligence? When the necessary information is not available, do TFs have the organic assets to obtain the information they need? I believe that the answer to all of these questions is a qualified "yes." We have a glut of information available to the S2, and with improved downlink systems, this information should reach the S2 in real time or near-real time. Additionally, the scout platoon is an outstanding asset that can fill intelligence gaps when provided with the proper focus.

This leaves one important ingredient missing from the formula. Can we translate the data into tactical intelligence? This is not just an S2 question.

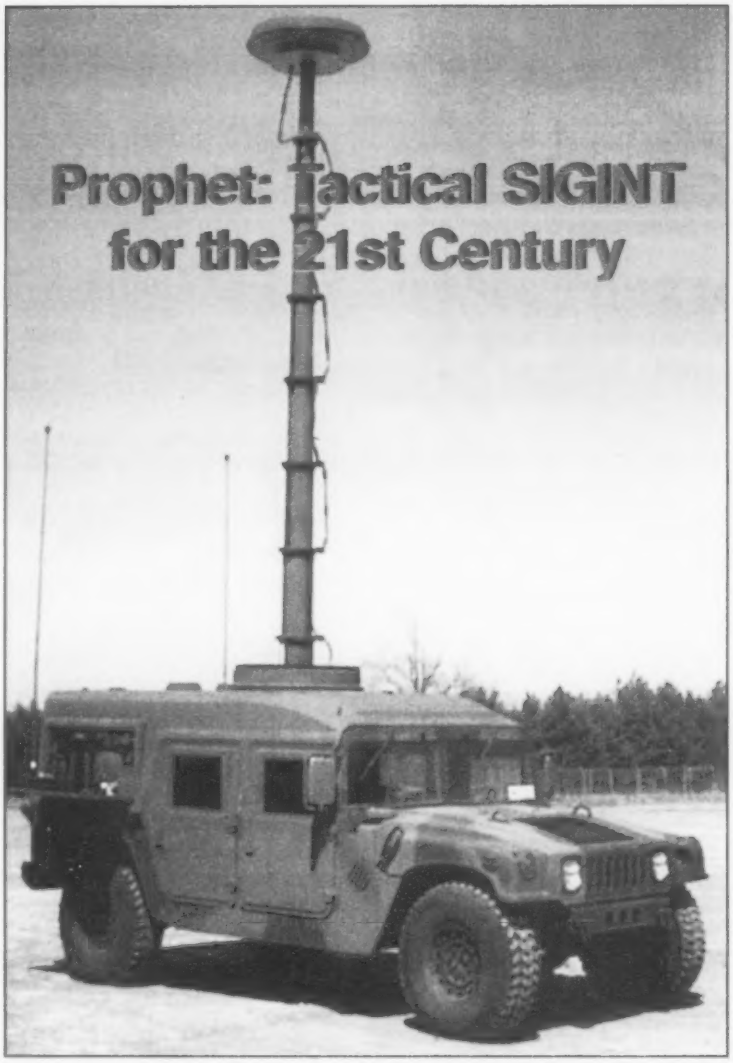
Commanders must provide the focus by asking the right questions; they cannot simply expect their S2s to know what they want. If intelligence truly drives the fight, then the commander must drive the intelligence. The battalion executive officer and S3 must constantly evaluate the intelligence picture to identify critical gaps, and the Army in general needs to focus more on developing tactically proficient S2s who can fight the enemy plan with confidence and expertise. This building of tactically proficient intelligence officers should start at the MI Officer Basic Course and continue throughout the intelligence officer education process.

Conclusion

The U.S. Army has perhaps the greatest MI capability in the world but too often, we are so impressed with capabilities that we lose sight of the requirements. We need to remember that the soldiers at the company command level—the ones who are where the "rubber meets the road"—normally do not have staffs or an abundance of extra time. Company commanders are concerned with the enemy

(continued on page 57)

Prophet: Tactical SIGINT for the 21st Century



by Colonel Kevin C. Peterson

The Prophet system has come a long way in the past 18 months. We have gone from a concept to fielding the first Prophet prototype in record time. Our goal is to field a relevant system to users quickly and then upgrade the base capability as technology matures. Prophet Ground Block I is the initial system that we will upgrade and improve. Users should not judge Prophet solely on Block I capabilities but wait until we integrate the subsequent block changes. Current ground signal intelligence (SIGINT) systems have not kept pace with technology. Prophet's unique contributions of force protection, assured support, close-in access, and a base system for adding additional capabilities will keep tactical SIGINT relevant during future conflicts.

Background

Governments across the globe continue to acquire and develop communications systems from both commercial and military sources to enhance their command and control (C^2) capabilities. These communications systems have undergone significant evolutionary technological changes since the early 1990s. In the future, individuals will use pocket-sized, wireless, personal communication systems to transmit voice and data to any location around the globe. Encrypted systems using spread-spectrum multiplexing techniques and advanced, complex digital modulations will be the norm. Transmission will be over fiber-optic networks or constellations of communications satellites providing instant access.

Due to the complexity of the radiofrequency (RF) environment and battlefield geometry, the intelligence community has developed a SIGINT system-of-systems approach to collect signals on future battlefields. The system of systems consists of airborne (manned and unmanned), ground, and reach-back capabilities. All echelons will integrate the collectors, thus creating a seamless collaborative environment. The forward piece of this architecture is Prophet.

The Prophet system, designed to operate in direct support (DS) of the maneuver brigades, gives the commander a comprehensive picture of electronic emitters within the brigade's battlespace. An additional Prophet capability will be the technical insertion of additional components of special-purpose-built systems (SPBS) that are theater- or contingency-specific for a particular signals environment. The SPBS design may plug into the Prophet vehicle or work cooperatively and complement the core Prophet system with a separate collection-support system.

Prophet Ground

The Prophet platform is a modified, four-seat M1097 HMMWV (high-mobility multipurpose wheeled vehicle) with a mounted AN/PRD-13(V)2 direction-finding (DF) system designed to provide

force protection in a DS role to the maneuver brigade. This system operates in the high, very-high, and ultrahigh frequency (HF, VHF, and UHF) spectra. It provides line-of-bearing (LOB) data and intercept on unencrypted, single-channel push-to-talk transmissions.

The Prophet intercept receiver can be configured to operate as a manpack system in support of forced entry airborne or air assault operations, and when vehicle-mounted, can operate on the move (OTM) in support of offensive and defensive operations. The vehicle contains racks for the dismountable receiver and two Combat Net Radios (CNRs). Additional equipment in the vehicle consists of a quick-erect antenna mast and other components. The vehicle has a load-carry capability of four soldiers as well as their mission essential and personal gear for a 72-hour mission duration. The entire Prophet dismounted mission load is airborne deployable and the four-person team can manpack it. The Prophet Basis-of-Issue Plan (BOIP) provides six systems per division, four per armored cavalry regiment (ACR), three per Initial Brigade Combat Team (IBCT), and five for U.S. Army Training and Doctrine Command (TRADOC).

Operations

Based on METT-TC (mission, enemy, terrain and weather, troops, and time available and civilians), use of Prophet will be in a mounted or dismounted configuration. When dismounted, the configuration is similar to the low-level voice intercept (LLVI) teams found currently in the light divisions. To gain a collection advantage on terrain that restricts vehicle movement, users can remove the dismountable equipment from the vehicle to facilitate better radio line-of-sight (LOS) operations. When dismounted, the teams will operate very close to the forward edge of the brigade's area of operation (AO). Dismounted, Prophet will transmit threat information over the brigade operations and intelligence (O&I) communications networks, through a relay team, or directly to its supported maneuver forces depending on the available communications capabilities.

In airborne and air assault operations, dismounted Prophet teams will deploy early in the cycle to provide force protection for early entry elements. The teams will use their organic CNR (AN/VRC-92 Single-Channel Ground and Airborne Radio System (SINCGARS)) with an AN/VRC-88 (manpack kit), which they can remove from the Prophet vehicle with the removable radio-receiving DF set (AN/PRD-13(V)2). The dismounted personnel and equipment will fall in on the Prophet vehicle as it arrives into the contingency area.

Prophet in mounted configuration will deploy close to or on the forward edge of the brigade AO. The reduced size of the Prophet system as well as its deployability (C-130 drive-on/drive-off (DO/DO) and sling-loadable under a UH-60A/L helicopter) will allow for early entry into the contingency area to support force protection missions.

The Prophet system OTM collection and DF capability supports fluid mobile operations. During OTM operations, the Prophet system will provide overwatch and operate within communications range of the supported mobile forces. Prophet will normally operate in a stop-and-go fashion ("short halt") when moving cross-country. This will allow for more precise LOBs and help prevent operator fatigue from employing the equipment in a vehicle moving over rough terrain. In a contingency that dictates more stationary operations, the team will locate the vehicle well forward in the brigade AO (within the first three kilometers). This will allow for deeper LOS into the target area, due to the low visual and communications signatures of the Prophet Ground system.

Command and Control

The MI battalion will task organize to provide the DS military intelligence company with the essential resources and personnel to perform the collection management and analysis functions needed to support the Prophet missions. The MI battalion's DS company will provide intelligence and electronic warfare (IEW) capabilities to the supported maneuver brigades and their subordinate units. Personnel from Career Management Field 98 will operate the Prophet and support analysis functions at the Brigade Tactical Operations Center (TOC).

The maneuver brigade S2 and S3, with input from the MI battalion's DS company commander and their staffs, will have C^2 for planning and executing Prophet missions. The analysts at the brigade TOC provide technical assistance and SIGINT expertise. The majority of the technical tasking that the analysts provide to the Prophet system will originate in the division SIGINT section of the Analysis and Control Element (ACE). The analysts will refine this tasking according to the maneuver brigade's priority intelligence requirements (PIR) and then directly task Prophet assets via the CNR. Electronic warfare support (ES) reporting instructions based on the PIR go to the Prophet teams and they receive updates as required. Tactical taskings (or operational orders) will originate in the S3 section in accordance with the brigade reconnaissance and surveillance (R&S) plan. The S3 disseminates them to Prophet elements over the O&I net or through the tasking and reporting net.

The Prophet mission manager is the maneuver brigade S2 or S3. The division ACE SIGINT section will support the brigade S3's execu-

tion of Prophet tactical control by recommending suitable Prophet deployment sites based on technical factors and the tactical situation.

The MI battalion will provide the TOC with the necessary resources and personnel to perform SIGINT collection management and analysis functions to support Prophet missions. Analysts from the MI battalion will perform these functions. The TOC will maintain FM (frequency modulation) communications with Prophet assets either directly or through relay stations depending on LOS and distance factors (normally approximately 5 through 20 kilometers from Prophet teams). The analysts at the TOC will receive technical information from the division ACE SIGINT section to assist in the technical steerage of Prophet assets. The information will go from the division ACE SIGINT section across the Tactical Internet to the TOC for ultimate integration on the All-Source Analysis System–Remote Workstation (ASAS-RWS). The TOC will ensure the integration of the Prophet teams into the brigade scheme of maneuver and the brigade's R&S plan as dictated by the brigade S2.

Future Growth

Block II adds electronic attack (EA) capability to Prophet. The planned EA upgrade is close behind the Prophet Block I ES production. Block III upgrades the Prophet receiver to collect against advanced and special signals.

Currently, the Program Manager (PM) for Prophet is conducting a worldwide market search for the most advanced, tested intercept receiver. The PM Office will build a Prophet Block III prototype in fiscal year 2001 (FY01); they will employ it in exercises to solicit soldier comments and input before going to production. Blocks IV and V bring measurement and signature intelligence (MASINT) along with micro- and robotic receivers to the Prophet Ground system. These blocks grow Prophet from an SIGINT-only system to a "multi-INT" (multiple intelligence disciplines) platform. We are currently building prototypes using ground surveillance radars (PPS-5D) and the Improved–Remotely Monitored Battlefield Sensor System (I-REMBASS) aboard a shelter-mounted HMMWV. We are fielding them to the IBCT with Prophet to form the Ground Sensor Platoon in the Reconnaissance, Surveillance, and Target Acquisition (RSTA) Squadron.

Prophet Air acquisition is on a different timeline than Prophet Ground. A SIGINT payload developed for integration on an unmanned aerial vehicle (UAV) will meet Prophet Air requirements. A risk-reduction phase in fiscal years 2001 through 2003 (FY01-03) will develop prototypes and demonstrate electronic mapping. Testing of Prophet Air will occur in FY05 with First Unit Equipped (FUE) in FY07.

Fielding

The Prophet Engineering and Manufacturing Development (EMD) phase will answer the question of whether this is the system we really want to do the job. The EMD program calls for delivery of 13 Prophet systems capable of providing both ES and EA in a mounted configuration and ES only in dismounted configuration. On 1 May 2000, two Block I systems were delivered to the 10th Mountain Division (Light) to participate in the Joint Contingency Force Advanced Warfighting Experiment (JCF AWE) in September 2000.

Five Prophet ground systems will go to the test community to complete developmental testing (DT) and the Initial Operational Test and Evaluation (IOT&E) from June through October 2000. Six systems will go to the Brigade Combat Teams at Fort Lewis, Washington, in August and December 2000. The Prophet ground production award (Milestone III) will be in the second quarter FY01 and FUE should take place in the second quarter FY02.

First impressions are lasting ones. If the impressions of the 110th MI Battalion, 10th Mountain Division, are an indicator, we have a winner with Prophet. The prototype Prophet SIGINT system has exceeded soldiers' expectations. The planned, programmed improvements will make Prophet a world-class SIGINT system by 2003 or 2004.●

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The Firefinder Radar: A Significant Contributor to the Division's Intelligence Picture

by Captain Andrew T. Johnson and Major John E. Della-Giustina

> *Artillery intelligence is one of the most vital of all the factors [that] make up the intelligence picture of the Division as a whole. When such intelligence is reported completely and accurately, it is possible to make from it a remarkably dependable estimate of the enemy's capabilities and intentions.*
>
> **—Front Line Intelligence, 1946**[1]

Opportunities for the collection of information abound on the battlefield. One of the least understood and most underused assets for all-source analysis is the AN/TPQ-36 (Q-36) and AN/TPQ-37(Q-37) Firefinder series of weapons-locating radars. The primary purpose of the Firefinder radar is to provide timely targets for friendly artillery to engage. An equally important task is to pass the radar data quickly to intelligence channels. Intelligence analysts are able to take this information and give the commander an immediate idea of enemy fire support operations and capabilities. This article explains the capabilities of the Firefinder radar systems and gives tips on capturing their usefulness for tactical intelligence. Analyzing the information the radar provides is extraordinarily valuable as a source to develop targets, update the situation map, confirm the situation and event templates, and aid in battle damage assessment (BDA).

The Q-36 and Q-37 radars represent the latest in a long line of improvements in our ability to locate indirect fire weapons. The Q-10 weapons-locating radar, fielded in the early 1950s, bridged the gap between the techniques of crater analysis and sound- and flash-ranging, and the era in which we now live. In the words of a former 2d Infantry Division (2ID) Artillery (DIVARTY) counterfire officer, the Q-10 *"resembled a box with half an orange on top."* It used a parabolic antenna and required the operator to track at least three rounds from the same weapon to compute firing location. It was slow and inaccurate by today's standards. The Q-4 followed the Q-10 in 1958. By the late 1960s, improvements had extended the Q-4's range to 12 kilometers with a target location error of 200 meters or less. To determine a target location, the Q-4 operator had to mark the entry and exit points of the round on a display screen using a grease pencil. A good operator could track two or three missions in this fashion. The Japanese Self-Defense Forces still use an indigenously produced version of the Q-4.

Firefinder Radar Capabilities

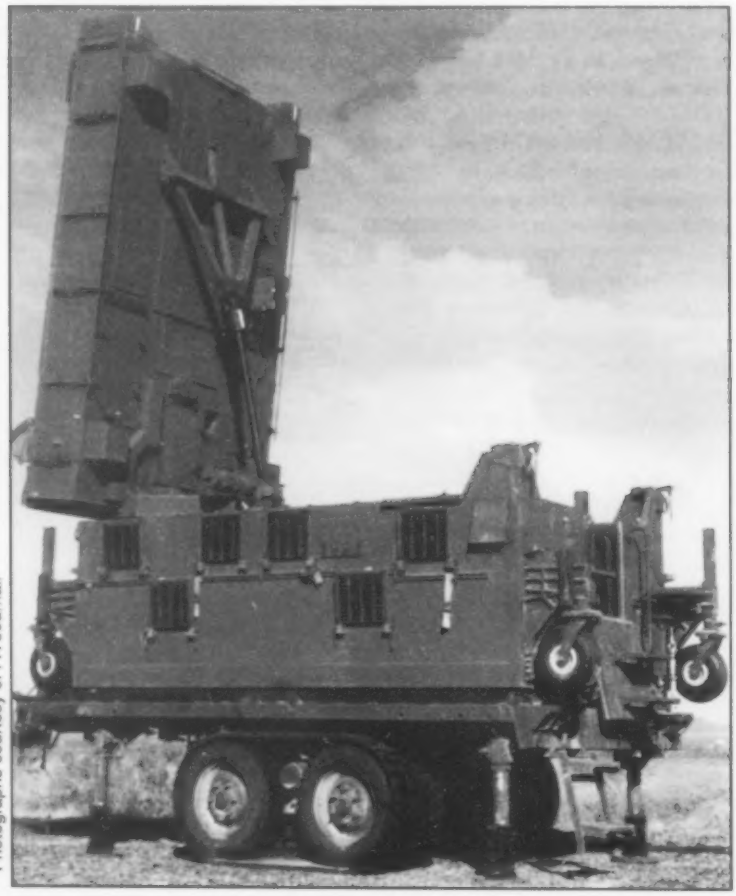
The Q-36, initially fielded in 1979, significantly increased the U.S. Army's ability to track artillery. Designed to track mortars and short-range artillery, it has a maximum range of 24 kilometers and tracks multiple rounds simultaneously. The Q-37 entered the Army inventory at about the same time as the Q-36. Developed to track long-range artillery and rocket systems, it has the same general capabilities as the Q-36. However, the Q-37 has a much greater range and is larger and less maneuverable. The Q-37 can acquire targets out to 50 kilometers for rockets and to 25 km for artillery and mortars. The range for mortars and artillery is not limited to 25 km but the accuracy of the radar prediction drops considerably at ranges beyond that distance. It is less effective against artillery because of the smaller projectile size.

Firefinder radars provide the "fired from" location as well as a predicted impact location, also referred to as the "point of origin" and "point of impact." Firefinder accuracy depends on how effectively the radar acquires and is able to track enemy artillery rounds as they progress through their trajectories. The longer a radar can track rounds, the better able it is to determine their points of origin. Proper radar positioning on terrain conducive to acquiring enemy artillery fires is also critical for effective tracking. Firefinder radars are generally able to identify artillery targets within 100 meters of the firing systems.

Radar Search Parameters

The computers on board both the Q-36 and Q-37 Firefinder systems have the ability to manage the areas in which to search for enemy artillery. The search fan can be as large as 1600 mils (90°), but is usually smaller to focus collection in the areas of interest where analysts have templated enemy artillery. For specific instructions and limitations on zone planning and usage refer to **FM 6-121, Tactics, Techniques, and Procedures for Fire Support for Field Artillery Acquisition**, and your resident radar and targeting warrant officer (Targeting Technician, military occupational specialty (MOS) 131A). A description of seven basic terms peculiar to radar search parameters follows.

Critical Friendly Zone (CFZ). Built around a geographical area containing an asset the commander wants to protect, the CFZ could include assets such as a critical communications node, a tactical operations center, an assembly area, or the Firefinder radars themselves. When the Q-36/-37 radar computer predicts that a round will impact in the CFZ, it generates an immediate call for fire against the responsible weapon.



Photographs courtesy of *FA Journal*.

The AN/TPQ-37 Firefinder radar.

Call for Fire Zone (CFFZ). This zone is a geographical sector that intelligence predicts or knows contains enemy artillery units and that the commander has designated for delivery of fires. When the radar detects a projectile fired from within this zone, it generates an automated call for fire.

Artillery Target Information Zone (ATIZ). This is a geographical zone that the commander wants closely monitored, but has not designated for an automated call for fire. The Q-36/-37 radar reports CFZ and CFFZ acquisitions before ATIZ targets.

Censor Zone (CZ). This zone is a geographical area in which the commander wants to prevent or limit target detections. For example, during the IPB (intelligence preparation of the battlefield) process, the division artillery (DIVARTY) S2, in conjunction with the division G2, determines that a certain area contains an enemy division artillery group (DAG). The DIVARTY S2 and Targeting Officer could build a censor zone between the forward line of own troops (FLOT) and the DAG to filter out the Regimental Artillery Groups' (RAGs) fires so that the radar receives acquisitions from the DAG for immediate counterfire purposes. Another use is to place a CZ around a friendly flanking artillery unit that the radar may detect as hostile when it is firing.

Common Sensor Boundary (CSB). Although not a fire control measure, the Division or Corps Counterfire Headquarters may establish this tool to reduce overlapping coverage by radars and the resultant duplicate targets. The most immediate application for a CSB is to delineate the close and deep counterfire fights by designating a boundary or phase line and designating it the CSB. By building CZs, the CSB would restrict Q-36s to acquire targets in CFFZs estab-

lished between the CSB and the radars while the Q-37s would collect in the CFFZs beyond the CSB.

Location Averaging and Automatic Censoring. Overwhelming the radars with targets is possible in high-intensity battles but the Q-36/-37 radars have ways to avoid this. *Location averaging* compares new tracks with locations in permanent storage and automatically averages it with a location detected earlier, thus generating fewer new targets. *Automatic censoring* tells the radar to stop tracking a target if it meets a threshold set by the operator.

Radar Deployment Order (RDO). Developed by the artillery S2 and targeting officer, the RDO gives each radar section chief his position, the azimuth on which to orient, the search zones to program into the radar, as well as any other pertinent mission information. The RDO would also detail the cueing schedule for the radars if the enemy possesses an electronic intelligence (ELINT) capability.

Organization

The target acquisition battery (TAB) in each DIVARTY normally has three Q-36 and two Q-37 radars assigned. The direct support (DS) field artillery (FA) battalion of each ground maneuver brigade habitually has a Q-36 attached. The Q-37 provides targets in general support (GS) to the DIVARTY's Multiple Launch Rocket Systems (MLRSs) and any other division artillery assets. A targeting warrant officer (MOS 131A, Firefinder Radar Technician) leads each radar section.

Several officers are technical experts on radar employment and counterfire issues in a division. At the maneuver brigade level, the targeting officer often works directly with the brigade fire support officer (FSO) to synchronize counterfire and radar considerations into the brigade's plan. Targeting warrant officers are also in the division fire support element (FSE) and the field artillery intelligence officer (FAIO) element of the division analysis and control element (ACE).

All battalion and higher FA units possess an organic Fire Direction Center (FDC) or a Fire Control Element (FCE). The FDC or FCE generates automated calls for fire by ensuring connectivity from sensor (radars or other reconnaissance and surveillance (R&S) sources) to shooter (howitzers and MLRSs) through automated cueing systems such as the Advanced Field Artillery Tactical Data System (AFATDS).

Effective Analysis of Target Acquisition Information

Knowing when, where, and in what strength the enemy will attack are common information requirements. A frequent statement during the military decisionmaking process is that artillery is the enemy's tactical center of gravity. Opposing force (OPFOR) doctrine creates artillery pools designated to provide fires for the main or supporting attacks. Significantly larger concentrations of artillery normally support the main attack. Frequently this is the crucial indicator of the main and supporting attacks. Collection plans ask questions about or related to reconnaissance vehicles, bridging and breaching equipment, communications patterns, and the reserve or exploitation force, but rarely do they address artillery in the detail it deserves. Collection plans task assets from truck drivers to aerial platforms in an effort to discover the enemy's intentions. The Firefinder radars organic to every U.S. Army DIVARTY are superb tools to collect detailed information on enemy artillery, which in turn is, or can be, the keystone of the enemy's entire offensive or defensive scheme.

Using the target acquisitions from the radar(s) over the course of hours allows an analyst to discern the locations where concentrations of fire are originating. The analysts can then place the resulting "acquisition" overlays on the situation templates to confirm if they have depicted the enemy artillery groupings correctly during IPB. Alternately, using the "predicted impact" of rounds fired, an intelligence analyst can see where the enemy is concentrating his fires. Combining this information with that from other sources and comparing it against the courses of action (COAs) that have been wargamed, analysts can assess if the main effort is where they thought it would be. Based on this fusion, the S2s can then provide solid predictive analysis to their commanders on how the enemy's scheme of fires will support their maneuver scheme. Obviously, the radar is not a crystal ball, but the fact that it provides **near-real-time information** makes it extremely valuable especially when integrated with other tactical intelligence.

Use in Battle Damage Assessment (BDA)

Estimating battle damage is also a critical task that concerns commanders at all echelons. A technique using radar information to **estimate** damage inflicted during counterfire is especially significant. Again, the timeliness of the radar information gives it value. By the time BDA summaries from corps and division arrive at the maneuver brigade and task force (TF) levels, the information may be too late to properly influence the battle.

A technique exercised at the 2d Infantry DIVARTY and its subordinate DS and GS FA battalions uses the methods described above to solidify artillery locations. Information that the radars and FDC can provide includes—

- Target location.
- Type of enemy indirect fire

system (mortar, rocket, or artillery).
- Predicted mean point of impact.
- Number of rounds or rockets fired on the target by friendly artillery.

Using that information and intelligence about the target, artillery S2s can estimate damage against the target based on the Joint Munitions Effectiveness Manuals (JMEMs), which provide probabilities of kill for various situations. Artillery S2s then track the enemy artillery unit's status and strength and provide this information to the supported maneuver S2 and G2. Thus, an effective S2 section can keep the commander apprised of the strength and location of the enemy artillery committed against him.

As with any potential intelligence source, we must build redundancy and mix into the equation. If wargaming identifies a need for BDA on enemy artillery, then the commander should allocate "eyes on" R&S assets to confirm or deny the damage inflicted in addition to the counterfire BDA estimate.

Synopsis[2]

It is difficult to overstate the important contribution Firefinder radars offer in developing an accurate picture of the battlefield and in estimating the damage inflicted on enemy units. One should not view the radars as purely collection tools; rather, analysts should understand how to obtain and use the information the radar provides. Use it to confirm the situation templates and gain an appreciation for the extent of the damage friendly artillery has inflicted. Summaries of radar acquisitions help develop trends of enemy activity. The S2 can combine knowledge of the enemy's initial locations, movement timelines, radar acquisitions, and other assets in the division and corps. Using this combined knowledge, the artillery and maneuver brigade S2s can track the battle in as much detail and as accurately as the division G2 ACE in some situations.

Soon tools developed under the aegis of the Joint Precision Strike Demonstration (JPSD) will leverage the capability of the Firefinder radars to provide information to the All-Source Analysis System (ASAS) at an exponentially higher rate. The Firefinder radars present opportunities for solid predictive analysis and accurate battle tracking. All tactical intelligence analysts must take advantage of the critical information they provide and include it in their all-source view of the battlefield. ✹

Endnotes

1. Lieutenant Colonel Stedman Chandler and Colonel Robert W. Robb, **Front Line Intelligence** (Washington D.C.: Infantry Journal Press, 1946).

2. Suggested sources for continued reading include—
- **FM 6-20-10, The Targeting Process**, May 1996.
- **FM 6-121, Tactics, Techniques, and Procedures for Field Artillery Acquisition**, September 1990.
- **FM 6-161, Field Artillery Radar Systems**.
- **FM 6-30, Observed Fire**, July 1991.
- Major John Della-Giustina, "The Artillery S2 and Interpretive Counterfire BDA," ***FA Journal***, January-February 1998, pages 28-30.
- **Jane's Radar and Electronic Warfare Systems**, June 2000.

Captain Andy Johnson is currently a Foreign Area Officer in Austria. He was the 2d Infantry Division (2ID) Artillery Assistant S2 in Korea. He commanded A Company, 502d MI Battalion, 201st MI Brigade, at Fort Lewis, Washington. He has served as the G2 Plans Officer, I Corps; All-Source Production Chief, I Corps ACE; Fire Support Officer, C Company, 3-9 Infantry Battalion; and as Fire Direction Officer and Executive Officer, A Battery, 2-8 FA Battalion. The military schools CPT Johnson attended include the FA Officer Basic Course, Military Intelligence Officers Transition Course, and MI Officers Advanced Course (MIOAC). He has a Bachelor of Arts degree in German from Central Missouri State University.

Major John Della-Giustina was the 2d Infantry Division Artillery S2 in Korea. He is currently the J2 Tactical Support Division Chief with Joint Task Force 6 at Fort Bliss, Texas. MAJ Della-Giustina has served as the Regimental S2 and Commander, 66th MI Company, 3d Armored Cavalry Regiment; MIOAC Tactics Instructor and Military History Instructor at the U.S. Army Intelligence Center and School; Electronic Warfare Company Commander and Technical Control and Analysis Element (TCAE) Chief, 104th MI Battalion, 4th Infantry Division (Mechanized); and as Company Executive Officer, Battalion S2, and Counterintelligence Platoon Leader in the 165th MI Battalion, 205th MI Brigade, V Corps, in Germany. Military schools he has attended include the Armed Forces Staff College (JCSOC), Command and General Staff College, Combined Arms and Services Staff School (CAS[3]), MIOAC and MI Officers Basic Course. He holds a Bachelors degree from the U.S. Military Academy and has a Master of Arts degree in History from West Virginia University. Readers may contact Major Della-Giustina via E-mail at john.della-giustina@jtf6.bliss.army.mil and by phone at (915) 568-8888 or DSN 978-8888.

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TRADOC Analysis Center—Fort Lee Reconnaissance Study Part I: The Study

by Michael P. Ley

The U.S. Army Training and Doctrine Command (TRADOC) Deputy Chief of Staff for Combat Developments (DCSCD) has designated the TRADOC Analysis Center (TRAC) as the lead agency for conduct of the reconnaissance study. This study will focus on selected tactical reconnaissance systems that the Interim Brigade Combat Team (IBCT) RSTA (Reconnaissance, Surveillance, and Target Acquisition) Squadron will employ in 2007 and a Force XXI Divisional Cavalry Squadron will use in 2010.

Study Participants and Purpose

Supporting TRAC in these efforts are the U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH), the U.S. Army Aviation Command (USAAVNC), and the U.S. Army Armor Command (USAARMC). The purpose of this study is to conduct a comprehensive examination on how the IBCT's RSTA and Army XXI Cavalry Squadrons will fulfill their reconnaissance requirements. The study will also identify requirements and TTP (tactics, techniques, and procedures) for C⁴ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) architecture interface and technical improvements to meet the maneuver commander's tactical reconnaissance needs. The results will go to doctrine writers and system acquisition decision makers concerned with the emerging IBCT and Objective Force designs built around the RAH-66 COMANCHE, the Interim Armored Vehicle (IAV), the Future Scout and Cavalry System (FSCS), and the Tactical Unmanned Aerial Vehicle (TUAV).

Supporting Exercises

Although final dates have yet not been set, three exercises will support the study. They include a virtual exercise, constructive exercise, and a subject matter expert (SME) map exercise (MAPEX).

Virtual Exercise. A virtual exercise will refine the proposed draft TTP focusing on eight specific treatments; it will include iterative sessions to allow refinement of the TTP draft. Following each run, an after-action review (AAR) will aid in refining the TTP and identifying new TTP as the situation warrants. The virtual exercise will collect objective data against measures of effectiveness (MOE) and measures of performance (MOP) to help gauge mission success but no direct comparisons between cases will occur. At the conclusion of the exercise, a draft report will highlight the refined TTP developed during the simulation. The virtual exercise will take place at Fort Knox, Kentucky, between 30 May and 25 June 2000.

Constructive Exercise. A constructive exercise will examine the effectiveness of the reconnaissance systems and associated TTP across the full spectrum of conditions (terrain, threat, and visibility). The focus in this exercise is to further explore potential TTP and assess the effect on mission accomplishment as METT-TC (mission, enemy, terrain, troops, and time available and civilians) conditions vary. When possible, the exercise will contain sufficient replications to attain statistical validity; this will allow quantification of variations in performance within each case. Objective data collected against the MOE and MOP will help gauge mission success, with direct comparisons between treatments being made. AARs held in conjunction with each run will further refine the TTP developed during the virtual phase of the exercise. The constructive simulation exercise will be between 5 and 22 July 2000 at White Sands, New Mexico.

Subject Matter Expert (SME) Map Exercise (MAPEX). The third exercise supporting the Reconnaissance Study, an SME MAPEX, will capture issues associated with specific alternatives and excursions to the extent that the constructive simulation could not cover them. The MAPEX will also address reconnaissance in support of urban operations, as the available resources will not allow full simulation during the virtual and constructive exercises. Conducted at White Sands on 20 and 21 July 2000, the SME MAPEX will also include an O6-level conference to review the emerging TTP.

Study Objectives and Issues

Effective tactical reconnaissance is essential for U.S. Army units to attain information dominance, and to achieve ultimate success on the battlefield. In the near term, the IBCT will employ interim reconnaissance platforms (IAV and FSCS), non-organic aviation support (RAH-66 COMANCHE), and the TUAV to achieve reconnaissance dominance over the enemy. This study

will explore the TTP with respect to these systems, given METT-TC constraints. The study strives for multiple objectives, intending to achieve insights at the system, organization, and doctrinal levels. Specific objectives include—

- Expanding the body of knowledge concerning how IBCT and Force XXI units—equipped with current and projected reconnaissance systems—execute the combined arms reconnaissance mission.
- Providing insights concerning the value added of developmental systems such as those identified above.
- Demonstrating the utility of both manned and unmanned reconnaissance systems.
- Supplying insights concerning the appropriate mix of systems within cavalry organizations.
- Identifying the synergies that occur when the reconnaissance systems are truly interoperable.
- Contributing insights regarding the best command and control (C^2) solutions.

TRAC, working in conjunction with the system proponents discussed above, has identified four major issues. The participants will study these issues under a range of battlefield environmental conditions. For example, the study will consider how the capabilities and weaknesses of each system impact on unit performance when operating in simple or complex terrain to include the urban environment, against both sophisticated and unsophisticated threats, and in varying terrain and weather conditions. These major issues include—

- How should COMANCHE, IAV, FSCS, and TUAVs work together as a combined arms reconnaissance capability?
- What operational TTP will IBCT and Army XXI ground and air reconnaissance systems employ under widely disparate METT-TC conditions?
- What technical C^4ISR requirements exist to ensure Army XXI Cavalry and reconnaissance units can successfully obtain, fuse, share, and exploit battlefield information across METT-TC extremes?
- What improvements to existent methodologies, models, and simulations would provide better analysis of intelligence, reconnaissance, and situation awareness issues.

Impact on Future Intelligence and Reconnaissance Operations

The TRAC study will impact future ISR and collection management (CM) operations as it will define the theoretical reconnaissance and surveillance capabilities and limitations of the RAH-66 COMANCHE, IAV, FSCS and TUAV. Additionally, it will validate related TTP, provide a blueprint for the successful resolution of operating and tasking these systems, and identify related gaps in the conduct of the ISR and possibly collection management missions. Emerging doctrine will incorporate these findings; when refined, they will provide TTP for the instruction of future system operators and intelligence analysts.

Part II to Come

Part two of this article, "Emerging Results of the TRAC Reconnaissance Study," will appear in a later issue of the ***Military Intelligence Professional Bulletin*** **(MIPB)**. TRAC-Lee (TRADOC Analysis Center–Fort Lee) will coordinate collection of this data with assistance from two members of Directorate of Combat Developments Doctrine Division, one officer from Battle Command Battle Lab–Huachuca, and two noncommissioned officers from the TRADOC System Manager Aerial Common Sensor and UAV.

Mr. Mike Ley is currently a doctrine writer in the Doctrine Division, Directorate of Combat Developments (DCD), in the U.S. Army Intelligence Center and Fort Huachuca. He retired from the Army in 1990. While on active duty, he served two tours as a military advisor in the Republic of Vietnam. He also served as a Polish linguist at Field Station Berlin. He was the Operations Officer for the 265th Army Security Agency (ASA) Company and was the S2 for the 2/503d Infantry Battalion, 101st Airborne Division (Air Assault). He also served as the Operational Test Officer, Intelligence and Security Board, and Independent Evaluator, DCD. He was the Collection Management Liaison Officer for the Third Republic of Korea (ROK) Army and later worked as a software test engineer on the All-Source Analysis System (ASAS) and on the Hunter UAV project. He has a degree in Cartography from Ohio University, Athens. Readers may contact Mr. Ley via E-mail at leym@ huachuca-emh1.army.mil or michael.ley@huachuca-emh1.army.mil.

Photo courtesy of Gregorio O. Figueroa.

Eyes of the Army.

PROPONENT NOTES

OCMI Website

The Office of the Chief, Military Intelligence (OCMI) website contains timely information on proponent issues ranging from enlisted career management field (CMF) overviews to warrant officer current and archived newsletters. The address is http://huachuca-dcd.army.mil/ocmi/index.html. We will update the website often, so please use it as a "favorite" resource for the latest information on the MI Corps.

Enlisted Actions

We have been extremely busy with a new on-line publication. In an effort to reach you in one form or another, OCMI will publish a quarterly MI newsletter accessible through our website. All NCOs are encouraged to review the summarized results for the last Master Sergeant (MSG) Selection Board, which breaks down the Army averages and percentages of those selected within the primary and secondary zones. The calendar year 2000 (CY00) MSG Board results are available on the following web site: http://www-perscom.army.mil/select/msgmenu.htm.

We have just completed the MI Proponent's promotion input to the CY00 Sergeants First Class (SFC) Board, which meets 31 May through 30 June 2000. Some of the updates that OCMI included within this packet apprise the promotion panel members of the special positions that some of you may hold. These include such positions as Career Management Noncommissioned Officer (NCO), Observer/Controller, Watch NCO, and Detachment Sergeant and NCO in Charge (NCOIC). We organized the career progression charts for each military occupational specialty (MOS) depicting those positions at each skill level and rank, where one may expect to hold these positions. The charts also delineate the approximate years-in-service specifications applicable to NCO Education System (NCOES) attendance. For an in-depth look at the MI Proponent supplemental information to the Selection Board, visit our OCMI web site.

The OCMI and PERSCOM (U.S. Total Army Personnel Command) Military Intelligence Branch continue to combine their efforts toward accession of new soldiers by recommending and establishing enlistment incentives in order to improve our accession rates within the MI MOSs. Currently four MI MOSs (96B (Intelligence Analyst), 98C (Signals Intelligence (SIGINT) Analyst), 98J (Electronic Intelligence (ELINT) Interceptor/Analyst), and 98XL (SIGINT Electronic Warfare (EW) Recruit) are on the Army's "Top 25" hard-to-fill-MOSs list. Two of these MOSs, 98C and 98XL, have a $20,000 six-year-enlistment bonus. Two success stories are in MOS 96B and 96H (Communications Interceptor/Locator). The 96B MOS achieved 92 percent of our initial fiscal year 2000 (FY00) goal while 96H exceeded its objective.

The OCMI Career Managers are in the last stages of incorporating the recommended input from the field for the first officially approved MOS Career Map. We will staff the Career Maps with the MI Corps Command Group, then post the Career Maps to the OCMI Website.

We continue maintain a strong pulse on language-dependent MOSs and language issues. We are sponsoring an interim request for approval that we hope will facilitate Reserve Component (RC) organizations' ability to access and train 97L (Translator/Interpreter) soldiers at the Defense Language Institute in Category III and IV languages. This is currently just a request but we would like to inform our RC leaders that we are working to alleviate some of the issues associated with Category III and IV languages, the two catagories with the most difficult languages to learn.

On another language issue, OCMI posted a 98G (Cryptologic Linguist) survey to address the retention challenges soldiers in the field are facing. We will collate, assess, and brief the results to the MI Corps leadership once we have received all input. We want to thank you for your participation in assisting us to make recommendations for the future health of this MOS.

Finally, we have issued a memorandum on behalf of Major General John D. Thomas, Jr., Commander, U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH), requiring organizations to validate the language identifier "L" for non-language-dependent MOSs (98C, 97B, etc.). This was an issue identified in the CSM/SGM Conference 2000 in March.

The primary point of contact (POC) for enlisted actions is Sergeant Major Antonio Moreno. You can reach him via E-mail at morenoa@huachuca-emh1.army.mil and telephonically at (520) 533-1174 or DSN 821-1174.

Warrant Officer Actions

The Army recently extended the Army Development Study (ADS) XXI Task Force (TF) until October. The first briefing to the Chief of Staff of the Army is in April. The TF con-

vened their second working group in Washington, D.C., in February. It consisted of warrant officer representatives from critical organizations and all warrant officer proponents. The after-action report from the work group is on the ADS XXI Website at http://www.army.mil/adsxxi/. In March, members of the TF briefed the USAIC&FH Commanding General on their progress and presented their findings on the Warrant Officer Personnel Management portion of the ADS XXI Study. The primary areas covered were the Warrant Officer Education System, recruiting, retention, and force structure. We have received many requests for information from the TF and expect the taskings to continue through the end of the study and the implementation phase. We continue to accept input from the field on all areas of the study.

The POC is CW5 Rex Williams, Chief Warrant Officer of the MI Corps. You may contact him via E-mail at williamsx@huachucaemh1.army.mil and by telephone at (520) 533-1183 or DSN 821-1183.

MI CORPS HALL OF FAME

Chief Warrant Officer/First Lieutenant Arthur S. Komori (Deceased)
Discipline: Counterintelligence/Interpreter
MI HOF Inductee: 1988

Arthur S. Komori was a University of Hawaii honor student and athlete, ROTC (Reserve Officer Training Corps) cadet, licensed pilot, and Japanese linguist. The U.S. Army Counter-Intelligence Police recruited him in Honolulu in February 1941.

Special Agent Komori began his intelligence career as an undercover agent in Manila, Philippines. For eight months before the attack on Pearl Harbor, he undertook the deadly serious game of surveillance against the Japanese business community. Sent to Bataan in late December 1941, Agent Komori interrogated Japanese prisoners of war (POWs); translated Japanese diaries, letters, and combat documents; intercepted Japanese military communications; and pioneered the methodology of psychological warfare.

In April 1942, he transferred to Australia to join General Douglas MacArthur's staff and report about

Japanese combat tactics on Bataan. In September 1942, Agent Komori instructed the first MI Language School graduates who translated Japanese documents and interrogated POWs captured in Guadalcanal. During this time, Agent Komori developed and wrote the method for treatment and interrogation of Japanese POWs used throughout the war in the Pacific by the Military Intelligence Service. In March 1944, he became a liaison to the Australian Government to monitor and evaluate Japanese broadcasts. In August 1945, Agent Komori was present at the surrender ceremonies aboard the Battleship Missouri and thereafter served as interpreter for General Elliot Thorpe, commandant of the 441st Counterintelligence Corps (CIC) Detachment. On 9 April 1948, Agent Komori was attached to a special task force to provide security for Eniwetok Atoll, site of atomic weapons testing.

Agent Komori resigned his commission in 1952 after General MacArthur's discharge. He made his contributions to the MI Corps and the nation always in silence, unrevealed, and most often in deadly peril. These continued acts of extraordinary and unheralded heroism are indeed unique and have few parallels.

Lieutenant Colonel Junius A. Watlington (Deceased)
Discipline: HUMINT
MI HOF Inductee: 1992

Junius A. Watlington's military career began in June 1944. He retired as a lieutenant colonel in August 1968.

In the early 1960s, Mr. Watlington served on a staff responsible for human intelligence (HUMINT) operations in Latin America. He then commanded a unit in Miami, charged with conducting operations against Communist Cuba. In the mid-1960s, he served as the Deputy Commander, 502d Military Intelligence Battalion in Korea. Later, he served with the Office of the Assistant Chief of Staff for Intelligence where his HUMINT expertise was paramount in developing organizations, training, and doctrine for Army Intelligence in Vietnam.

His extensive military experience superbly qualified him for managerial duties with the Army's Military Intelligence Civilian Excepted Service Career Program. He served as the Operations Officer for the 500th Military Intelligence Group's clandestine HUMINT collection unit in Japan. He later received a promotion and served as Liaison Officer for the Commander, 500th MI Group.

The culmination of Mr. Watlington's 35-year HUMINT career was his service for seven years as Director, Collection Operations, U.S. Army Operational Group, U.S. Army Intelligence and Security Command (INSCOM). Under his tutelage, this collection unit spearheaded HUMINT collection in the Third World. Four times the Director of Central Intelligence honored its accomplishments as the "National HUMINT Collectors of the Year."

MI Corps Hall of Fame Nominations

The Military Intelligence Corps Hall of Fame (HOF) recognizes those individuals who have made a lasting contribution to the MI Corps or have distinguished themselves as intelligence professionals. Commissioned officers, warrant officers, enlisted soldiers, or professional civilians who have served in a U.S. Army intelligence unit or in an intelligence position in the U.S. Army are eligible for nomination for induction into the Military Intelligence Corps HOF.

Nominations for HOF must be for individuals only; the MI Corps will not consider unit or group nominations for induction. Furthermore, individuals cannot nominate themselves, and nominees cannot be current U.S. Government employees in an intelligence role. An individual who has retired from military service but continues to serve as a U.S. Government civilian in any intelligence capacity is precluded from consideration until retirement from all forms of federal intelligence service. The exclusion from nomination includes temporary retirees, medical or otherwise, and members of the Active Reserve or National Guard until transition to permanent inactive or retired status.

Although nominees must have served with Army intelligence in some capacity, the supporting justification for their nominations may include accomplishments from any portion of their careers, not merely their periods of service in Army intelligence. For example, a noncommissioned officer (NCO) who served in Army MI and then, after retirement, joined the Defense Intelligence Agency as a civilian, is eligible for the Hall of Fame by virtue of his or her Army service. However, the justification may include achievements from both the military and civilian careers, even though the civilian intelligence service was not with an Army unit.

Each Hall of Fame nomination packet must include the following:

- A nomination letter signed by the nominator that includes his or her current postal and E-mail addresses and telephone numbers.
- The full name and official rank or grade of the nominee at the time of departure, retirement, or death.
- A career biography, to include the crucial assignments and accomplishments of the nominee that warrant induction into the HOF.
- A narrative justification specifically stating the major accomplishments and achievements of the nominee and his or her impact on the Army and MI.
- The current address, E-mail, and telephone number of the nominee (if living), or the address and telephone number of a surviving family member.
- The nominee's Social Security Number/Service Number.
- An 8" x 10" photograph of the nominee, if possible. If an 8" x 10" is not available, any photo that clearly shows the nominee is acceptable.

Nomination packets must be complete. Any nomination packet received without the first four items above will not go before the Selection Board until receipt of the missing item(s). The HOF Action Officer will review all packets and, if needed, will ask the nominator to provide more information in order to assure the nominee receives the fullest consideration by the Selection Board.

Send your nominations to Headquarters, U.S. Army Intelligence Center and Fort Huachuca, ATTN: ATZS-CDR (Jim Chambers), Fort Huachuca, Arizona 85613-6000 or by E-mail to chambersj@huachuca-emh1.army.mil. The HOF telephone numbers are commercial (520) 533-1178 and DSN 821-1178. HOF will notify the nominators of the receipt of their packets and the date of the next Selection Board, as well as update them on the packet's strength, completeness, and the results of the Selection Board.

SLY FOX

ASAS Master Analyst Support to the Initial Brigade Combat Team

by Sergeant First Class Brett J. Wagner

With the advent of the Initial Brigade Combat Team (IBCT)—soon to be outfitted at Fort Lewis, Washington—the All-Source Analysis System (ASAS) Master Analyst Branch has fielded a requirement to assign two ASAS Master Analysts in the IBCT's MI Company. This is a new ball game for Master Analysts, who traditionally serve in a division or corps analysis and control element (ACE) or various U.S. Army Intelligence and Security Command (INSCOM) or U.S. Army Training and Doctrine Command (TRADOC) positions.

What prompts this modification to the Master Analyst fielding design? It is part of an effort to satisfy the requirement of the Army's Chief of Staff for a lighter, more responsive and lethal force structure.

the IBCT will conduct collateral SIGINT collection, an idea that requires fundamental changes to the way we have done SIGINT processing in the past

What does the IBCT do that is so extraordinary it requires a Master Analyst to assist in performing intelligence operations? First, we have to look at the way this brigade's intelligence organization will do business. There is an increased role for the Intelligence battlefield operating system (BOS) throughout the IBCT's operational construct. Digitization spans the spectrum of intelligence collectors and analysts, from the individual soldier to multiple command and control (C^2) nodes and analytical organizations. The MI Company, formerly under operational control of conventional brigades, will now be subordinate to the IBCT. There are also numerous human intelligence (HUMINT) collectors embedded throughout the brigade's organizational structure in addition to new signals intelligence (SIGINT) collectors and an unmanned aerial vehicle (UAV) platoon. With this increase of intelligence collectors comes an increased requirement to conduct battlefield synchronization of intelligence assets. There is also a significant increase in the number of analysts found at the brigade headquarters as well as in the subordinate battalion staffs.

One of those organizations is the Reconnaissance, Surveillance, and Target Acquisition Squadron. The formation of this unit demonstrates a fairly radical departure from the way the Army, and specifically tactical MI, has done business in the past. Part divisional cavalry squadron, part MI battalion, this unique entity combines the traditional screening roles of the Cavalry with tactical intelligence collection in a single cohesive structure. To facilitate coordinated movements and technical tasking in this era of situational hyper-awareness, the battalion and brigade staffs each have a full compliment of requirements and mission managers. We had not previously formalized these functions below the division's collection management section.

In addition to the increased role of the collector in this brigade, the IBCT also has an increase in analytical capability. Until now, the brigade or battalion staff was primarily a consumer of analyzed intelligence. The future will require a robust analytical capability at all levels and analysts that are capable of conducting asynchronous intelligence analysis; this is intelligence analysis resulting from a collaborative effort by those most directly affected by the accuracy of the intelligence picture. Those closest to the fight historically lacked the assets to see beyond what is immediately in front of them. Those in higher echelons lose resolution as the enemy comes in contact and information overflow obscures their ability to discern the true nature of the threat. By capitalizing on shared battlefield visualization, multiple C^2 nodes can come to a clearer understanding of the nature of the enemy situation and can quickly resolve conflicts in that understanding. In the IBCT, using a set of shared graphical overlays, known as the common operational picture (COP), is our primary means of accomplishing this deconfliction.

The primary analytical system used by the IBCT is the Block II Remote Workstation (RWS). While the RWS is part of the fielded ASAS family of systems and is not new in that aspect, our expectations of the RWS have increased due to the interoperability required by the IBCT. For instance, there is no

single-source enclave to aid the SIGINT analysts in their function. In fact, the IBCT will conduct collateral SIGINT collection, an idea that requires fundamental changes to the way we have done SIGINT processing in the past. Additionally, an embedded HUMINT analysis cell in the MI company will use the CI/HUMINT Automated Tool Set (CHATS). This section, known as the S2X, will use CHATS to facilitate the processing of HUMINT reporting and to conduct link analysis. The Brigade will also use the new Imagery Workstation to conduct imagery analysis of organic UAVs as well as other imagery platforms. The analysts must fully integrate information from these disparate sources into the RWS's database.

The IBCT will research and provide answers to a variety of information requests that will enable it to fight against an asymmetrical threat without interaction from a division or other headquarters. This independent capability is necessary because the brigade's higher headquarters could potentially be out of the theater. The capability to research this critical information is through intelligence reach-back into theater and national agencies for access to databases and reports over the Secure Internet Protocol Router Network (SIPRNET). The ability of the INSCOM Production Branch to customize products for users that have a geographic or threat-specific target set to work greatly enhances this reach-back capability. The products that INSCOM builds aid the analyst by making research less cumbersome and time consuming. This feature is not specific to the IBCT and any unit needing the service can use it. For more information about this exceptional research tool, contact the INSCOM Production Branch at the web address http://vulcan.belvoir.army.mil.

Will any of these changes make a lasting impact on our future readiness? Time will tell.

Congratulations to Sergeant First Class Charles Perkins and Staff Sergeant Louie Barlolong on their selection as the IBCT Master Analysts.

Sergeant First Class Wagner entered the Army as a 96B in 1989. He has participated in Operations JUST CAUSE in Panama, DESERT STORM, and JOINT ENDEAVOR in Bosnia-Herzegovina. He has served in numerous assignments as an intelligence analyst and most recently as the ASAS Master Analyst for the 101st Airborne Division (Air Assault). He is currently assigned as an instructor as the ASAS Master Analyst Branch at Fort Huachuca. He is a graduate of the Master Analyst Course, Battlestaff Noncommisisoned Officer Course, and Advanced NCO Course. Readers may contact the author via E-mail at brett.wagner@huachuca-emh1.army.mil and telephonically at (520) 533-4607 or DSN 821-4607.

QUICK TIPS

Weather Factors in Planning TUAV Operations

by Richard J. Szymber

The value of unmanned aerial vehicles (UAVs) in a war zone was readily apparent in our missions over Kosovo, which began in April 1999. However, these UAV operations ceased in October 1999 because of unfavorable weather conditions.

One of the important Tactical UAV (TUAV) planning requirements for the brigade commanders is to understand the ground and weather. To ensure the greatest chance of mission success, mission planners for the TUAV must be aware of weather factors that will affect their operations. They must be familiar with the meteorological critical thresholds shown in Figure 1 to effectively use the Shadow 200 TUAV.

The figure lists the weather sensitivities for the Shadow 200. It includes the TUAV weather impacts affecting the—

- Air vehicle during take-off and landing at the launch and recovery site.
- Air vehicle along its flight path.
- Infrared/electro-optical (IR/EO) sensor payload over the target area.
- Ground data terminal.

The U.S. Army Training and Doctrine Command (TRADOC) System Manager for the Aerial Common Sensor (ACS) and UAVs (TSM-ACS/UAV) validated the information in Figure 1 in April 2000. TUAV planners and operators can use these critical threshold values to familiarize themselves with the weather factors that can affect their missions.

Critical meteorological thresholds are those values of weather factors that can significantly reduce the effectiveness of, or prevent execution of, tactical operations and weapons systems. Significant variations above or below the critical value can prevent the successful accomplishment of a mission. The critical values define the operational limits beyond which it is not feasible to operate because of safety consid-

erations or decreasing effectiveness.

Richard Szymber is the U.S. Army Research Laboratory (ARL) meteorologist. He has spent the last five years serving as the ARL liaison officer to the U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH). He holds a Master of Science degree in Atmospheric Sciences from the University of Arizona and a Bachelor of Science degree in Physical Geography from Arizona State University. Readers may contact Mr. Szymber via E-mail at rszymber@arl.mil.

Tactical UAV	Weather Parameter	Critical Value	Impact
Air Vehicle	Crosswind Speed (Surface)	> 20 knots	RED
	Crosswind Gusts (Surface)	> 15 knots	RED
	Rain	>= Moderate Intensity	AMBER
	Rain	>= Heavy Intensity	RED
	Icing	= Any Occurrence	RED
	Turbulence	>= Light Intensity	AMBER
	Turbulence	>= Moderate Intensity	RED
Ground Data Terminal	Wind Speed (Surface)	> 60 miles per hour (Operating)	RED
	Wind Speed (Surface)	> 75 miles per hour (Non-Operating)	RED
IR Payload Sensor	Clouds (All Types)	= Any Occurrence in LOS	AMBER
	Fog	= Any Occurrence	AMBER
	Rain	> 0.2 inch per hour	AMBER
	Snow	>= Light Intensity (Ceiling Dependent)	AMBER
	Snow	>= Moderate Intensity (Ceiling Dependent)	RED
	Blowing Snow	>= Light Density	AMBER
	Blowing Snow	>= Moderate Density	RED
	Sleet	= Any Occurrence (Flight Limitation also)	RED
	Ice Crystals	= Any Occurrence in LOS	AMBER
	Hail	= Any Occurrence in LOS	RED
	Damp Haze	= Any Occurrence	AMBER
	Relative Humidity	>= 95%	AMBER
	Blowing/Widespread Dust	>= Moderate Density	AMBER
	Blowing Sand	>= Moderate Density	AMBER
	Smoke (Natural/Fires)	>= Light - Moderate Density	AMBER
	Phosphorous Smoke (Tactical)	= Light - Moderate Density	AMBER
	Fog/Diesel Oil Smoke (Tactical)	= Light - Moderate Density	AMBER

Figure 1. Shadow 200 TUAV Weather Sensitivities.

IR Payload Sensor (Continued)	Thermal Infrared Crossover	= Any Occurrence	RED
	Thermal Contrast (Target-Background)	Δ <= 3.6 F (2.0 C)	AMBER
	Thermal Contrast (Target-Background)	Δ <= 1.25 F (0.7 C)	RED
EO Payload Sensor	Visibility (Surface)	<= 4,000 meters	RED
	Clouds (All Types)	= Any Occurrence in LOS	RED
	Fog	= Any Occurrence	RED
	Drizzle	= Any Occurrence	AMBER
	Rain	>= Light Intensity	AMBER
	Rain	>= Moderate Intensity	RED
	Snow	>= Light Intensity	AMBER
	Snow	>= Moderate Intensity	RED
	Blowing Snow	>= Light Density	AMBER
	Blowing Snow	>= Moderate Density	RED
	Sleet	= Any Occurrence (Flight Limitation also)	RED
	Ice Crystals	= Any Occurrence in LOS	AMBER
	Hail	= Any Occurrence in LOS	RED
	Dry Haze	= Any Occurrence	AMBER
	Damp Haze	= Any Occurrence	AMBER
	Blowing Sand	>= Moderate Density	AMBER
	Blowing Sand	>= Heavy Density	RED
	Blowing Dust/ Widespread Dust	>= Moderate Density	AMBER
	Blowing Dust/ Widespread Dust	>= Heavy Density	RED
	Smoke (Natural/Fires)	>= Light - Moderate Density	AMBER
	Smoke (Natural/Fires)	>= Heavy Density	RED
	Phosphorous Smoke (Tactical)	= Any Occurrence	RED
	Fog/Diesel Oil Smoke (Tactical)	= Any Occurrence	RED
	Raised Dust (Arty/HE/Veh/Helo)	= Any Occurrence	AMBER
	Raised Snow (Helo/HE)	= Any Occurrence	AMBER

NOTE: Impact code AMBER means moderate impact/degradation (degradation > 30%) while impact code RED means severe impact/degradation (degradation > 70%).

Figure 1. Shadow 200 TUAV Weather Sensitivities (Continued).

TSM NOTES

TSM UAV/ACS—UAV Conference 2000

by Colonel William M. Knarr, Jr.

The U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH) and TRADOC (U.S. Army Training and Doctrine Command) System Manager for Unmanned Aerial Vehicles and Aerial Common Sensor (TSM UAV/ACS) hosted UAV Conference 2000 at Fort Huachuca, Arizona, 6 through 8 June 2000. The theme for this year's conference was "Tactical UAV: The Way Ahead." Major General John D. Thomas, Jr., Commanding General of USAIC&FH, provided the keynote presentation with his view of the evolving nature of intelligence and the exciting role UAVs will play in the current transformation of the U.S. Army. This year's conference featured 33 separate presentations on current UAV operations including—

- Planned support to the Initial Brigade Combat Team (IBCT).
- System and payload developments.
- Unique UAV mission support to both military and civil (Drug Enforcement Agency) operations.
- Current perspectives on UAV programs from representatives of the Department of the Army, the Program Executive Officer for Intelligence and Electronic Warfare and Sensors, the Project Manager for the Tactical Unmanned Aerial Vehicles, and the TSM UAV/ACS.

An added feature for this year's conference was the inclusion of static displays of current and developing UAV systems from several defense contractors.

The attendance for the annual UAV Conference was the largest to date with more than 200 representatives from each of the military services, Department of the Army and Department of Defense government civilians, and industry. The conference concluded with a government-only working session of the UAV Integrated Concept Team (ICT) membership. In this meeting, the participants discussed and worked a number of current and important UAV-related issues, including the proposal for TUAV (Tactical UAV/Shadow 200) fielding priorities and an in-depth update on future UAV requirements and proposals.

Colonel Bill Knarr is the U.S. Army Training and Doctrine Command System Manager (TSM) for the Unmanned Aerial Vehicles/Aerial Common Sensor (UAV/ACS). Readers may contact him via E-mail at william.knarr@huachuca-emh1.army.mil and telephonically at (520) 533-2165 and DSN 821-2165.

All-Source Analysis System Update

by Colonel Jerry V. Proctor

Sore back, feet hurt, blisters, or just plain tired? It may be the All-Source Analysis System's fault. ASAS' fault? ASAS has had the blame for many things, but a sore back? Well, for the young soldiers charged with the set up and tear down of the tactical operations center (TOC), a sore back is not out of the question.

In its recent configuration, one ASAS system weighs 254 pounds. That is with the newer, lighter CHS-2 (Common Hardware-Software)—the computer, monitor, uninterrupted power supply (UPS), and carrying cases for Block II. I do not know about you, but for this old TSM (U.S. Army Training and Doctrine Command (TRADOC) System Manager) that is backache. Now that a standard heavy division is authorized more than 20 ASAS Remote Workstations (RWSs), and 16 ACE (analysis and control element) Workstations, that equates not only to significant tonnage, but significant cubic space as well. Despair not, help is in the works.

The ASAS program is leading the entire Army Battle Command System (ABCS) into a new, much lighter platform. This is the Versatile Computer Unit (VCU). This new system is part of the CHS 2 family so it receives full logistic support by "big" Army. In fact, its builder is the CHS contracting company.

The VCU has—

- The same processing power as the UCU-2 (Ultra Computing Unit Version 2), a 333-MHz 64-bit Sun® Ultrasparc-III processor.
- More disk-pack storage.
- A 24 x CD ROM (compact disk read-only memory).
- Floppy disk and Iomega® Jazz drives.

- Flat-panel displays.
- PCMCIA (personal computer memory card international association) card reader.

All this performance is in a package that weighs 45 pounds, 10 to 15 more with packing cases. That equates to at least 185 pounds less weight—we are talking some serious "Slim Fast" here. Cubic size significantly reduces as well. The VCU will require well under half the space of the UCU, which means you might now have room for some "non-essentials" like sleeping bags, food, and water.

The All-Source Analysis System is the first program to adopt the VCU. The Army will field it to the XVIIIth Airborne Corps this summer and to additional units according to an Army DCSOPS (Deputy Chief of Staff for Operations) schedule.

So you did not think the TSM ASAS could cure your tired old "dogs"? Well, never underestimate what your friendly MI TSMs can do. Got other troubles? Send us a note. We are here to serve you, the user.

Colonel Jerry Proctor is the U.S. Army Training and Doctrine Command (TRADOC) System Manager (TSM) for ASAS. Readers can contact him via E-mail at proctorj1@huachuca-emh1.army.mil and telephonically at (520) 533-3504 or DSN 821-3504. The Deputy TSM is Mr. Michael Strack. Readers can reach him by E-mail at strackm@huachuca-emh1.army.mil and telephonically at (520) 533-3507 or DSN 821-3507.

The S2 Warrior?

(Continued from page 39)

ahead and the enemy just over the next hill; anything else is probably beyond the immediate area of interest. The battalion S2 needs to tell the commander—

- How many and what type of enemy weapons systems he will see.
- Where he will encounter these systems.
- How the enemy will use these systems against him.
- What their effects will be on friendly forces.

We have the capability to provide our front-line warriors at the company and battalion command levels with the intelligence they require; all we need to do is better focus our efforts.

Captain Dave Norton is currently a member of the Battle Command Training Program (BCTP) World Class Opposing Force (OPFOR). He enlisted as a 98GCX Czech Linguist Voice Interceptor in 1983, served with 511th MI Battalion in Germany, and 3d Armored Cavalry Regiment at Fort Bliss, Texas. Commissioned as an Armor officer through Officer Candidate School, he has served as a tank platoon leader with 1-34 Armor Battalion, 1st Brigade, 1st Infantry Division at Fort Riley, Kansas, during Operations DESERT SHIELD and STORM. CPT Norton has held positions as Tank Company Executive Officer, Brigade Plans Officer, Battalion Maintenance Officer in an Armor Battalion, Tank Company Commander, Armor Battalion Headquarters, and Headquarters Company Commander, and Instructor in Operations and Tactics at the MI Officer Basic Course. He is a graduate of the Armor officer basic and advanced courses and Combined Arms and Services Staff School (CAS^3). Readers may contact the author via E-mail at nortond3@leavenworth.army.mil.

Attention MICA Members
MIPB Subscriptions through MICA

In its quarterly newsletter (4th Quarter 1999), *The Vanguard*, the MI Corps Association notified its members that they would only continue receive the published copy of the ***Military Intelligence Professional Bulletin*** if they returned a form by 1 March 2000. (This action was due to a price increase for ***MIPB*** to $10 and $12.50 foreign.) MICA sent us only 110 names for continued receipt of the published magazine effective with the April-June issue of ***MIPB***. The rest of you may contact the MICA Administrator, Ms. Janet Klucsarits, via E-mail at corporate@isishq.com (include "MIPB Subscription" in the subject line) or you can call her at (520) 459-5012. Their website address is http://www.micorps.org. The mailing address is MICA, P.O. Box 13020, Fort Huachuca, AZ 85670-3020.

The Vanguard stated that ***MIPB*** is available on line; that fact appeared to be part of MICA's justification for this action. ***MIPB*** is available at our website but our policy since 1995 has been to load an issue on the Internet when the printer mails the following issue. Thus, the Internet issues will not include the current one.

MICA is now charging $11.50 for ***MIPB*** subscriptions with MICA membership. If you wish to subscribe to the magazine directly rather than through MICA, you may contact Mrs. Cruz Martinez via E-mail at martinezc@huachuca-emh1.army.mil or by telephone at (520) 538-1015 or DSN 879-1015; the fax number is (520) 538-1007 or DSN 879-1007. Her mailing address is Commander, U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH), ATTN: ATZS-CLM (Martinez), Building 61730 Cibeque Street, Fort Huachuca AZ 85613-6000.

Our October-December 2000 issue of ***MIPB,*** "MI Out Front in Transformation," will be a special issue devoted entirely to the transformation of the Army and MI's part in that change. MICA members should contact the organization if they want copies of that issue.

Glossary for IBCT- and Transformation-Related Figures and Articles

07 GOSC – General officer steering committee
08 09 BOD – Board of directors
AAE – Army acquisition executive
AAF – Army airfield
ABCS – Army Battle Command System
ACE – Analysis and control element
AEA – Army Enterprise Architecture
AFATADS – Advanced Field Artillery Tactical Data System
AOR – Area of responsibility (joint term)
APOD – Aerial port of debarkation
ARFOR – Army force
ARL – Airborne Reconnaissance Low
ASAS – All-Source Analysis System
ASAS-L – ASAS-Light
ASAS RWS – ASAS Remote Workstation
ASEO – U.S. Army Systems Engineering Organization
AWE – Advanced warfighting experiment
BCT – Brigade combat team
BOD – Board of directors
BOS – Battlefield operating system
C^2 – Command and control
C^3S – Command, control, and communications systems
C^4ISR – Command, control, communications, computers, intelligence, surveillance, and reconnaissance
CAMEX – Computer-aided map exercise
CCIR – Commander's critical information requirements
CECOM – U.S. Army Communications–Electronics Command
CGS – Common Ground Station
CHATS – Counterintelligence/HUMINT Automation Tool Set
CI – Counterintelligence
CJTF – Combined joint task force
CMDR – Commander
COC – Council of colonels
COLL – Collection
COP – Common operational picture
CP – Command post
CROP – Common relevant operating picture
CSA – Chief of Staff, U.S. Army
CTT – Commanders Tactical Terminal
DCD – Directorate of Concepts and Doctrine
DCSOPS – Deputy Chief of Staff for Operations and Plans
DDO – Dynamically distributed overlay
DISC4 – Director of Information Systems for Command, Control, Communications, and Computers (Army)
DISE – Deployable intelligence support element
DS – Direct support
DTES – Divisional TES
EAD – Echelons above division
ECC – Effects coordination cell
EEA – Essential elements of analysis
EECP – Early-entry command post
EPLRS – Enhanced Position Location and Reporting System
EXCON – Exercise control
$FBCB^2$ – Force XXI Battle Command, Brigade and Below
FECC – Fire effects coordination cell
FST – Fire support team
GCS – Ground Control Station
GOSC – General officer steering committee
GS – General support
GSR – Ground Surveillance Radar
HF – High frequency
HHC – Headquarters and headquarters company
HPT – High-payoff target
HUMINT – Human intelligence
HVT – High-value target
IAV – Interim Armored Vehicle
IBCT – Initial brigade combat team
IBCT-1 – First initial brigade combat team
IBS – Intelligence Broadcast Service
IER – Information exchange requirements

IPB – Intelligence preparation of the battlefield
ISR – Intelligence, surveillance, and reconnaissance
IT – Information technologies
ITRT – Individual Tactical Reporting Tool
JCF – Joint contingency force
JCF AWE – JCF Advanced Warfighting Experiment
JIC – Joint intelligence center
Joint STARS – Joint Surveillance Target Attack Radar System
JTF – Joint task force
JTT – Joint Tactical Terminal
JWICS – Joint Worldwide Intelligence Communications System
LCD – Limited conversion divisions
LRAS3 – Long-Range Scout Surveillance System
MAPEX – Map exercise
MCO – Map collaborative overlay
MCS – Maneuver Control System
MDMP – Military decisionmaking process
METT-TC – Mission, enemy, terrain and weather, troops, and time available and civilians
MI – MI company CP [Carrington and Schlabach Figure 2]
MOE – Measures of effectiveness
MOP – Measures of proficiency
MOS – Military operational specialty
MS – Multisensor
MTW – Major theater war
NAI – Named area of interest
NBC – Nuclear, biological, and chemical
NCW – Network-centric warfare
OA – Operational architecture
O&I – Operations and intelligence
O&O – Organization and operation
OMT – Operational management team
PEO – Program Executive Officer
PROC – Processing
Q-36/-37/-47 – AN/TPQ-36/-37/-47 Firefinder radar
REMBASS – Remotely Monitored Battlefield Surveillance System
I-REMBASS – Improved REMBASS
RMA – Revolution in military affairs
RSOI – Reception, staging, and onward integration
SCT TM – Scout team
SIGCEN – Signal center
SIGINT – Signals intelligence
SINCGARS – Single-Channel Ground and Airborne Radio System
SIPRNET – Secure Internet Protocol Router Network
SMART-T – Secure, Mobile, Anti-jam, Reliable Tactical Terminal
SME – Subject matter expert
SOP – Standing operating procedure
SQDN – Squadron
SSC – Small-scale contingencies
STAR-T – Super-High-Frequency Tri-Band Advanced Range-Extension Terminal
TA – Technical architecture
TAA – Tactical assembly area
TAC – Tactical command post
TES – Tactical Exploitation System (TENCAP system replacing AEPDS, ETRAC, and MIES)
TI – Tactical internet
TOC – Tactical operations center
TOE – Table of organization and equipment
TPIO-ABCS – TRADOC Program Integration Office–Army Battle Command System
TRAC – TRADOC Analysis Center
TRADOC – U.S. Army Training and Doctrine Command
TROJAN SPIRIT – TROJAN Special Purpose Integrated Remote Intelligence Terminal
TROJAN SPIRIT II – TROJAN SPIRIT Version II (or TS II)
TS – Top Secret
TSM – TRADOC System Manager
TTP – Tactics, techniques, and procedures
TUAV – Tactical UAV (Shadow 200)
UAV – Unmanned aerial vehicle
UHF – Ultrahigh frequency

How to Submit an Article to *MIPB*

Select a relevant topic of interest to the military intelligence community. For example, it could be about current operations and exercises, equipment, TTP, or training. It could be historical, explain lessons learned, or it could be an essay-type thought-provoking piece. It could be a short "quick tip" on better use of equipment or personnel, or fast "work-arounds" for problems. Articles from the "hot spots" are always welcome. Seek to add to the professional knowledge of the MI Corps. Propose changes, describe a new theory to dispute an existing theory, explain how your unit has broken new ground, give helpful advice on a specific topic, or explain how a new piece of technology will change the way we operate.

Write an outline to organize your work and include a working title and headings. Plan to write 1000-2500 words (about 2-4 pages single-spaced text with normal margins, not counting graphics) and include graphics that enhance understanding of your topic. Quick tips should be 300-800 words. Put the "bottom line up front" and write clear, concise introduction and conclusion paragraphs. Follow proper rules of grammar. Consult **DA Pamphlet 600-67**, **Effective Writing for Army Leaders**, or William A. McIntosh's **Guide to Effective Writing**.

When writing for ***MIPB***, several stylistic pitfalls to avoid for a clearer, more forceful article are—

- **Maintain the active voice as much as possible**. Write, "The soldier performed the task" rather than "The task was performed by the soldier."
- **Make your point**. Avoid writing about internal organization administration. If your topic is a new piece of technology, tell the readers why it is important, how it works better, and how it will affect them. Avoid lengthy descriptions of who approved the new system, quotations from senior leaders describing how good the system is, the reports your organization filed regarding the system, etc.
- **Use the fewest words to state your points**. Write "Leaders must emphasize training" rather than "It is imperative for Military Intelligence professional leaders to refocus their attention to training issues."

Please send the article via E-mail to mcgoverne@huachuca-emh1.army.mil or mail it (with a soft copy on disk) to Commander, U.S. Army Intelligence Center and Fort Huachuca, ATTN: ATZS-CLM (MIPB Editor), [expedited shipping: Bldg 61730, Room 102], Fort Huachuca, AZ 85613-6000. (Please do not use special document templates and do send the graphics separately if by E-mail). We can accept articles in Microsoft Office 97, Word 6.0, Word Perfect 6.0a, and ASCII and PowerPoint, Corel, and Adobe graphics. Please include with your article:

- A cover letter with your work, home, and E-mail addresses and telephone numbers, stating your wish to have the article published. Please include your social security number (SSN) so that we can find you if you transfer, PCS, or ETS/retire before we publish your article; we will protect your SSN and make no other use of it. Also, indicate whether we may put your article on our Internet web site even if we do not publish it in the printed magazine.
- Pictures, graphics, and crests/logos with adequate descriptions. Try to find good "action" photos that illustrate your article; photos and other graphics really enliven an article. We need complete captions for the photos (the who, what, where, when, why, and how); the photographer credits; and include the author's name on photos. We can return photos if so requested—be sure to include an address to which you want the photos sent after we use them. We will gladly accept photos without articles too.
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- The full name of each author in the byline and a biography for each. The biography should include the author's current duty position, other related assignments, civilian degrees (degree, school, major), and advanced military education (CGSC, War College, SAMS, MSSI, SEIP, PGIP, etc.). (Tell us if we can print your telephone number and E-mail address with the biography.)

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309th Military Intelligence Battalion

Teal blue and white were the colors used for the U.S. Army Security Agency (ASA), the original designation of the organization. The key symbolizes the unit's mission—the guarding of security. The golden bear's head on the key represents the state of California, where the unit activated. The lightning flashes, symbolic of electricity, relate to the importance of electronic communications as part of the unit's function.

The 309th Military Intelligence Battalion, 111th Military Intelligence Brigade, at Fort Huachuca, Arizona, is one of the largest Active Component battalions in the U.S. Army. With an average daily strength of 1200 soldiers, the Team Sentinel Battalion serves as one of the Military Intelligence Corps' key training battalions.

The battalion's history began 19 September 1952, when the Headquarters and Headquarters Detachment (HHD), 309th Communication Reconnaissance Battalion constituted with the Sixth U.S. Army in the Army Reserve. The Army activated the unit 1 November 1952 in Los Angeles, California. During late 1955 and early 1956, its organic elements were both constituted and activated, and the HHD redesignated as a headquarters and headquarters company. In October 1956, the unit reorganized and was redesignated the 309th ASA Battalion. The 309th continued its service with the Sixth U.S. Army until its inactivation and release from assignment in July 1986.

Under an initiative led by then Major General Paul E. Menoher, Jr., the unit redesignated 1 February 1990 as the 309th MI Battalion, withdrew from the Army Reserve, and moved to the Regular Army. The battalion transferred to the U.S. Army Training and Doctrine Command on 17 August 1990, and organized at Fort Huachuca with the motto "Sentinels of Security."

Since its activation as a training battalion, the 309th MI Battalion has provided initial training for thousands of professional MI soldiers from a multitude of military occupational specialties (MOSs) and career fields. Today, the Team Sentinel Battalion's five companies conduct initial entry training (IET) and advanced individual training (AIT) for MOSs 96B, 96R, 97B, 97E, and 97L. The Battalion also conducts both academic and nonacademic training for the MI Officers Basic Course (MIOBC), the International Officers Intelligence Basic Course (IOIBC), the MI Warrant Officers Basic Course (WOBC), and the 350B, 350D, 351B, and 351E career warrant officer tracks.

In addition to training and graduating soldiers and officers in the areas of all-source analysis, ground surveillance, human intelligence (HUMINT), and counterintelligence, the battalion's mission includes providing subject matter experts to a number of commands and locations. Over the last five years, Team Sentinel has deployed soldiers in support of contingency and training missions worldwide to include: Bosnia-Herzegovina, Kosovo, Hungary, Kuwait, Saudi Arabia, South Korea, England, El Salvador, and multiple locations throughout the continental United States. The Battalion also provided mobile training teams to U.S. Army Forces Command (FORSCOM) and U.S. Army Special Operations Command units and provided observer/controller augmentees to the Joint Readiness Training Center and the National Training Center.

During the last nine years, the Team Sentinel Battalion has committed itself to producing only the highest quality MI professionals. With an average graduation rate of more than 2500 soldiers per year, a large percentage of MI soldiers began their careers as members of the 309th. Since its activation, the 309th MI Battalion has faithfully served both the Army and our great nation with distinction. Team Sentinel remains committed to continuing that service for the indefinite future.

Sentinels of Security!

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